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The Journal

OF THE

South Carolina Medical Association

VOL. XIX.

GREENVILLE, S. C., JANUARY, 1923

NO. 1

CONTENTS

EDITORIAL DEPARTMENT:

Pickens Society Takes Prompt Action on Chiropractor Legislation ----- 365

ORIGINAL ARTICLES:

Tuberculosis of the Kidney, by Milton Weinberg, M. D., Sumter, S. C. ----- 366

A Genito-Urinary Routine Suggested as Practical for the General Practitioner by M. H. Wyman, M. D., Columbia, S. C. ----- 372

(Contents continued on page ii.)

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ORIGINAL ARTICLES:

Humans with Especial Reference to Asthma and Hay Fever, by Hal M. Davidson, A. B., Phar. B. M. D., Atlanta, Ga.-----	377
Paranasal Sinuses of Children with Special References to Ocular Symptoms, by E. W. Carpenter, M. D., F. A. C. S., Greenville, S. C.-----	381
OBSTETRICS AND GYNECOLOGY DEPARTMENT -----	383
UROLOGY DEPARTMENT -----	384
SURGERY DEPARTMENT -----	386
NERVOUS AND MENTAL DISEASES DEPARTMENT-----	387
SOCIETY REPORTS -----	388

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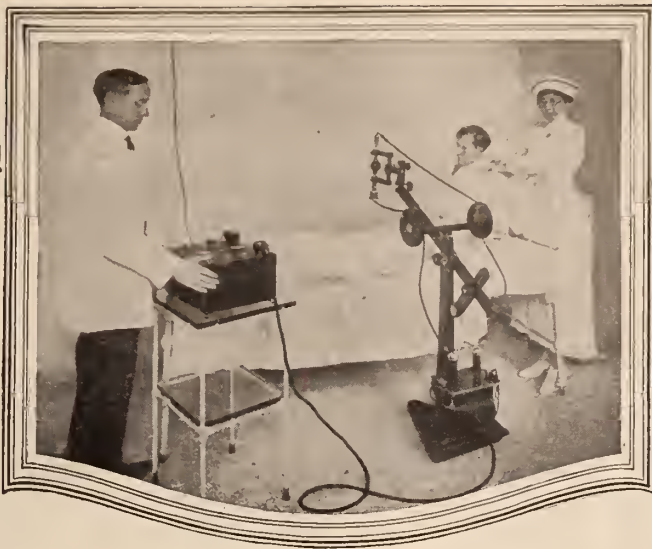
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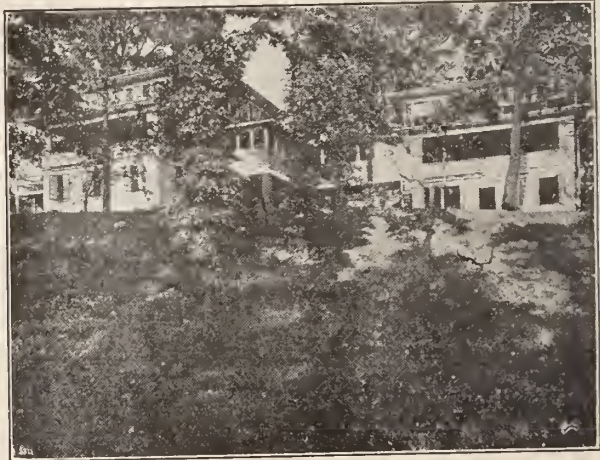
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EDITORIAL

PICKENS SOCIETY TAKES PROMPT ACTION ON CHIROPRACTOR LEGISLATION

We give a prominent place to the communication from the Pickens County Society and trust that every doctor in the State will read it and assist the Legislative Committee of the State Association to combat any effort on the part of the Cults to secure a separate examining board.

The following letter has been sent to all the Medical Societies in the State:

Dear Doctor:—

At the regular meeting of our society on December 6th., the suggestion was made that we take some steps to get in touch with our profession in South Carolina regarding the Chiropractor bill that

most likely will come up before our Legislature at its next meeting.

Resolutions were adopted that this committee make an effort to get the profession to individually see their respective legislators or for the societies to invite them to a regular or special meeting and get them to see the dangers of forming a separate licensing board for Chiropractors.

Naturally the plea of these men will be that they do not practise medicine as we do, but simply apply their "adjustments" to certain ailments. However, if the bill should go through, we have good reason to believe that they will attempt to treat any case that comes before them with a positive promise of cure, provided a considerable sum of money is paid in advance,

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The most important part of the training of these "Doctors" seems to be the CASH IN ADVANCE method which is very SUCCESSFUL in RELIEVING the patient in many instances of all his cash.

Now we do not wish to appear as dictating to you as to what you should do but as brother practitioners we earnestly plead that you try hard to get this matter in its true light before your representatives.

If you can not have them at a regular meeting, please call a special meeting and show them that we are working for the unsuspecting public and not from any selfish standpoint on the part of our profession.

Doubtless many of our profession are not acquainted with these quacks, but we can cite you to instances that have happened right at the doors of members of this committee, where hopeless incurables have

been fleeced for considerable sums and attempts made to get others the same way.

One case of tuberculosis we believe lost much valuable time being "adjusted" and is now in our State Sanatorium. Another in which a promise of cure of an idiotic child was made provided the poor mother would pay \$45.00 in advance. Other similar cases could be cited but why multiply.

Doctor, the Legislature convenes in January. It is now December. What are you going to do about it?

W. A. Tripp,
F. L. Webb,
W. B. Furman,
J. C. Pepper,
D. E. Peek,
J. L. Bolt, Com.

ORIGINAL ARTICLES

TUBERCULOSIS OF THE KIDNEY

By Milton Weinberg, M. D., Sumter, S. C.

The object of this paper is to bring before you the subject of surgical tuberculosis of the kidney. I wish to give the present status of renal tuberculosis as I am afraid that its importance is not recognized by many of the profession. I am quite certain that many cases are not correctly diagnosed. Then there is a prevailing idea that it should be treated at first only medically. This is quite wrong because, as clinical and experimental evidence has shown, it is a surgical condition with a more or less favorable outlook for recovery, if not too far advanced. The disease, therefore, offers splendid chances for a cure, but if not treated surgically it

progresses surely into an incurable and ultimately fatal condition. Acute miliary tuberculosis, in which the renal lesion are part of the general process, does not permit other than medical treatment. This type of the disease is progressive and rapidly fatal.

Pathological evidence points to the impossibility of healing of tubercular kidneys. Wildbolz has treated four cases with tuberculin for two to twelve months and marked improvement took place in the general and local condition. After satisfying himself that the patients had decidedly improved he did nephrectomies on them. Pathological examinations of the removed organs revealed no evidence of even a slight healing process. He, rightly, concluded that only nephrectomy could effect a cure. Keyes, of New York, reported three cases of apparent cures by medical treatment. The remission of

symptoms lasted for about two years in two cases, and seventeen years in one case. The one which lasted seventeen years showed a complete renal destruction at autopsy. In the other two cases nephrectomy was done for exacerbation of the symptoms.

Forni did some most interesting experimental work. He reproduced the disease in animals bilaterally, and later did unilateral nephrectomy. He found that the remaining kidney had not only hypertrophied but showed evidence of an arrest of the tubercular process in some of the cases. He concluded that "the removal of one kidney caused an increase in the blood supply in the remaining one," and that the organ hypertrophied. These changes, namely, active hyperemia and hypertrophy have a beneficial influence on the tuberculous process in the remaining kidney. "The lesions were less diffuse and more circumscribed in the nephrectomized animals than in the controls; showed less tendency to cavity formation and a greater tendency to connective tissue production and sclerosis. They have a tendency to remain localized. These results are in accordance with clinical reports."

Effreduzzi has produced bilateral renal tuberculosis, and found that nephrectomy would cause the animals to live longer than those upon which the bilateral condition was produced and no operation done.

Bryan and Peters in the early seventies did the first nephrectomy for tuberculosis of the kidney. Twenty-five years ago the surgical form of the disease was considered rare. The greatest strides in the diagnosis and treatment of the disease have been made within the last ten years. Cystoscopy, ureteral catheterization, the Rowntree and Geraghty renal functional test, blood chemistry, urography, and the X-ray have brought such changes in urological diagnosis, that we have only since then

been able to treat kidney diseases intelligently.

532 patients were operated on at the Mayo Clinic for renal tuberculosis from 1894 to 1918. This number represents 0.6 % of all operations done there during the same period. There were a total of 85,000 operations. From 1900 to 1919 the Mayo Clinic did 621 nephrectomies for this condition. In a little more than 20,000 autopsies Kapsamer found 191 cases or a little less than 1%. Sixty-seven were unilateral and 124 bilateral. Out of 12,688 autopsies performed at five large hospitals, 603 or 4.7% showed tubercular kidneys. 25% of the autopsies performed on those with pulmonary tuberculosis show renal tuberculosis.

Out of the 532 Mayo cases, 362 or 70% were between the ages of 21 and 40 years; 2 up to ten years; 37 between 11 and 20 years; 125 between 41 and 60; 3 from 61 to 70 years. They were twice as frequent in the male as in the female. In children the disease in the kidneys is usually part of a general active tubercular condition and in such cases surgical interference is not usually indicated.

Renal tuberculosis is not often primary. At least 71% of the cases show evidence elsewhere in the body. Pulmonary involvement is a frequent coincidence; genital tubercular lesions coexist in about 73% in males. Bone and joint lesions, spondylitis, and adenitis are not uncommon complications. Any one or more of these complications do not necessarily contraindicate nephrectomy. Frequently genital complications, such as prostrate, seminal vesicles, and epididymis, improve and sometimes heal after nephrectomy. Unless the coexisting lesions are acute the prognosis is not necessarily unfavorable. Tuberculosis of the kidney is more often unilateral; if allowed to persist all of the cases will eventually become bilateral and fatal.

The mode of infection is still a matter of controversy. The paths of infection to be considered are: (1) ascending; (2) through the lymphatics; (3) through the blood stream; (4) through the kidney capsule by direct invasion from tuberculous adjoining tissues, as in the bowel, adrenal gland and spine. This last more obviously needs no further comment.

Ascending infection of the kidney with the tubercle bacillus almost never occurs. However, this path of infection at one time was considered to be the most frequent, but since the newer methods of urological diagnosis have been developed, it has been shown to be wrong. Infection was thought to ascend from the bladder because usually bladder symptoms appeared before any others in renal infections. Tuberculosis of the bladder is never primary, but usually secondary to renal tuberculosis. It is sometimes secondary to genital tuberculous lesions. There are no cases found at autopsy where the bladder has been involved without renal or genital involvement. Renal tuberculosis is usually primary but only as the genitourinary tract is concerned, and many cases of genital tuberculosis are secondary to it. There are, however, numerous instances where the kidneys are infected with the tubercle bacillus and no other tissue of the genito-urinary tract is involved.

Experimentally, cultures of tubercle bacilli have been injected into the ureters. The lesions first to develop are in the cortex. This would seem to prove that ascending infection does not occur.

The lymphatic route has ardent advocates. A few cases have been observed where the only renal lesion demonstrated was an ulceration in the pelvis or a lesion of the papillae which projects into the pelvis. The lymphatics of the kidney would bear out this path of infection. Brongersma thinks that infection takes place through the mediastinal glands from the

apex of the lung, through the glands along the aorta to the kidney. In this manner he accounts for so many cases being unilateral. There is a possibility of travel from the lymphatics of the ureter and through the retroperitoneal lymph glands.

Unquestionably, the blood stream is the most frequent path of infection. The blood often has been shown to carry various organisms. A bacilluria, of tubercle bacilli, may occur without any lesion of the kidney. The kidney is frequently diseased with tuberculosis without involvement of any other part of the tract. This is especially true in the early cases, hence, the importance of an early diagnosis.

The common site of a tubercular lesion is the region between the cortex and medulla about the base of the pyramid. Bacilli reach the glomeruli through the blood stream, escape through their capillaries, and enter the lumen of the tubule through the capsule of Bowman. There is marked proliferation of the kidney cells and a lymphocytic infiltration. General caseation takes place. The disease breaks through the calyces into the pelvis, setting up a tubercular pyelitis. Infection and spread may take place in other directions and finally destroy the entire organ, producing autonephrectomy. The lymphatics which surround the tubules probably carry the organisms to various parts of the organ and even into the capsule.

The pathological process may be anything from a single milary tubercle to a lesion destroying the entire organ. Large pockets may be seen continuous with the kidney pelvis producing the ulcerocavernous type of the disease. In some cases pyonephrosis occurs. Sometimes the organ is small and contracted, showing a sclerous type. In unilateral disease, a toxic nephritis may be seen in the non-tubercular kidney.

The symptoms of chronic renal tuberculosis may range anywhere from a few

weeks to twenty years or more. One interesting fact is that there is a positive family history in only 20% of the cases.

The most common symptom is frequent urination. This is sooner or later associated with tenesmus and pain. Eisen-drath states that 45% to 60% of tubercular kidneys are often treated for months and sometimes years for cystitis. Sometimes the only subjective symptoms are those of cystitis. A case which was recently referred to me well illustrated this fact. Her only symptoms were frequent and painful urination. Examination showed extensive tuberculosis of the right kidney and ureter.

Incontinence and retention may be present in some cases.

Dull aching and colicky pains in the lumbar region on the side affected and along the ureter may be the first symptoms of the disease. They are present in about 35% of the cases.

Some patients have no fever at all. Some have it during an exacerbation or after becoming secondarily infected in the kidney, usually with the colon bacillus or one of the cocci group. According to Barney and Welles, 28% of tubercular kidneys show secondary infections associated.

Hematuria is sometimes the first and only symptom for months or even years, but frequently coexists with the others. It may be slight or transient; or it may be severe.

There is usually pus in the urine, and the tubercle bacillus. A urine with pus and no organisms is very suggestive of tuberculosis. Tubercle bacilli may be demonstrated in the urine in about 80% of the cases with the stained smear. It must be remembered, however, that 10% of the cases of tuberculosis elsewhere in the body will show tubercle bacilli in the urine without renal involvement. Cystoscopy and ureteral catheterization, and pyelo-

graphy if necessary will enable us to decide whether or not there is a renal lesion present. Sometimes a catheter specimen from a tubercular kidney will show the tubercle bacillus when it could not be demonstrated in a bladder specimen. Sometimes the trauma from a pyelogram will cause the organism to appear in the urine when previously it did not. Most often red blood cells show up on microscopic examination of the urine.

A tubercular kidney may exist with an entirely negative urine. This occurs in the so-called occluded renal tuberculosis. In this condition the disease has progressed to such an extent that the entire kidney has been destroyed and there remains only a sac with purulent, cheesy material. I recently saw a case of this type that came to autopsy. The patient died from a general peritonitis following an intestinal perforation due to ulcer. This condition is also known as auto-nephrectomy. The disease may be so insidious that there are no subjective symptoms. This type of renal tuberculosis was first recognized as a clinical entity by Zukerkandl in 1907. It is observed in about 10% of all cases of renal tuberculosis.

Cystoscopy is the one best method for the diagnosis of tuberculosis of the kidney, and with ureteral catheterization, it must be relied upon in the majority of the cases. The bladder changes are usually characteristic. The orifices are usually affected in renal tuberculosis; the trigone in genital tuberculosis. Small grayish-yellow miliary tubercles with a surrounding inflammatory zone may be observed in the bladder wall but especially around the orifice of the ureter draining the affected kidney. The orifice may be thickened, irregular, retracted and gaping;—the golf-hole orifice. The bladder sometimes shows ragged, irregular outlined ulcers. Other bladders show a diffuse granular cystitis with flakes of mucus deposited. In some

of the cases there is little or no change in the bladder.

Much information is frequently obtained from ureteral catheterization. In some of the cases the diagnosis depends on the findings from this method of examination. Even when one kidney is known to be diseased, it is necessary to pass the ureteral catheter to find out the condition of the other, whether or not it is infected, and its function.

Braasch has shown the value of the X-ray as an aid in diagnosis. There are characteristic changes found in some cases, shown by a pyelogram, in the pelvis of the kidney. Only 20% to 30% of tuberculous kidneys may be diagnosed by the X-ray alone. Sometimes cystoscopic examination is impossible and in some of these cases positive evidence may be obtained by X-ray examination of the kidney. The shadows are caused by the deposits of calcium in the tuberculous area. These shadows may be multiple and small, or may be single large ones. The shadow is usually dimmer than the one cast by a renal stone and shows a varying consistency, sometimes spoken of as "filigree" shadows. Those of tubercular areas are usually irregular and indefinite in outline. Occasionally the X-ray findings and clinical examinations may not enable us to distinguish tubercular lesions of the kidney from calculi. It can then be ascertained only at operation.

In the surgical treatment of renal tuberculosis, nephrectomy is usually our choice of procedure. A cure can be obtained only by removing the kidney. Occasionally, nephrotomy is resorted to as a palliative measure when the general condition of the patient or extensive disease of the other kidney will not permit nephrectomy. More brilliant results can not be produced in surgery than those following nephrectomy for renal tuberculosis where the other kidney is healthy and the bladder not exten-

sively involved. Sometimes the bladder symptoms are entirely relieved within a short time after the diseased organ is removed. In extensive bilateral disease, surgery should not be practiced except as a palliative measure, such as drainage. The prognosis of bilateral renal tuberculosis is not good. Even after removing the most diseased organ, 75% die within one year. Only 20% die within five years following nephrectomy in unilateral cases. In bilateral diseases, if one kidney is slightly involved and the other very extensively, it may be well to remove the worst one.

Two important principles are to be considered in performing nephrectomy for renal tuberculosis, namely, the disposition of the perirenal fat and the ureter. These are especially important in order to avoid the formation of sinuses.

All have agreed that the perirenal fat should be removed in every case, whenever possible. This fatty tissue is frequently involved. Involvement may be so slight that only very careful examination could reveal it. According to Stahr, there are lymphatics connecting the cortex with the fatty capsule. It is probable, therefore, that this capsule will sooner or later become infected in all cases.

In regard to the disposition of the ureter, it is doubtful whether or not it has anything to do with formation of sinuses. The Mayos have advocated isolation of the cut end, either by drawing it out through the wound or by placing a rubber tubing over it and allowing it in this way to communicate with the exterior. Recent observations seem to show that the sinuses lead directly to the kidney pedicle and not to the ureter. The extra-peritoneal route should be used for the nephrectomy.

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DISCUSSION.

Dr. T. R. Littlejohn, Sumter:

I think Dr. Weinberg's paper is very timely. He has covered the subject so thoroughly that there is nothing new that I can add, but I wish to emphasize a few of the important points, namely: All cases of early tuberculosis of the kidney are unilateral, and can only be cured by nephrectomy. I might also add that a primary cystitis is

very rare, but is often secondary to a lesion of the kidney.

The general surgeon and the general practitioner should always bear in mind a tubercular kidney in all cases of chronic lumbago, hematuria and cystitis, and should have an expert urological examination made for any of these conditions.

Dr. W. R. Barron, Columbia:

I had occasion to study this subject very thoroughly two years ago, and I realize that Dr. Weinberg has covered the field very fully, and in a most excellent and concise way. I wish, however, to emphasize some of the things that he has said. First, when you have definite findings, with the tubercle bacilli present, with reduction in function in kidney showing the bacilli, with the other kidney healthy, the conclusion as to what is to be done is a simple matter. But when you have not a clear-cut picture, when you cannot make the decision, then do not push the urologist for too quick an opinion. If there is anything in which he needs sympathy it is this condition, for an early clear diagnosis.

Chronic cystitis, as treated by every practitioner who takes time to treat cystitis, that does not yield to ordinary treatment in a reasonable time, should then be referred for further investigation, if you are not able to make a diagnosis yourself. And when you advise a patient to have such an examination, tell him or her that decisions can not always be reached quickly. Prepare them for co-operation with the man who does the work.

The constant finding of pus and blood or either, without the presence of other bacteria, is certainly suggestive of tuberculosis of the kidney, though you may fail many times to find tubercle bacilli present.

Dr. R. M. Politzer, Charleston:

I shall be glad for Dr. Weinberg to tell us, unless he has already done so, about the incidence of tubercular kidney in childhood. How often does it occur? Is there any connection between pyelonephritis and tuberculous kidney? I am referring to the case where there is pus in the urine, with the typical symptoms of absorption of pus, as fever, vomiting, pallor anorexia etc.

I do not suppose that many of these cases are tubercular kidney, for many get well, but is there any connection?

Dr. F. B. Johnson, Charleston:

I think that Dr. Weinberg may have laid more stress upon the difficulty of finding the tubercle bacillus in the urine, for it takes more care, ordinarily, than finding it in the sputum. We should have as large a quantity of urine as possible, and the methods of concentration are proving more satisfactory than the usual plain smears. Of these methods, the one being most recommended now is that by mixing one volume of the urine with two volumes of 1% sodium carbonate in 1% phenol, thoroughly shaking for ten minutes, then autoclaving at 15 lbs. pressure for twenty minutes, and finally centrifuging down at high speed for one half hour. Smears are made from the sediment and stained in the usual manner, the bacillus is often found then, when not found by any other method.

Dr. Weinberg, closing the discussion:

In answer to Dr. Politzer's question as to the incidence in childhood of tuberculosis of the kidney, I can not state it exactly. In the series of 532 cases operated on at the Mayo Clinic and nephrectomy done, 2 were in children under 11 years of age.

I regret to say that children seldom get modern urologic examination in diseases of the genito-urinary tract. I think that the urologic examination of children has been sadly neglected. This is not said from a critical standpoint, but with a constructive idea.

Tuberculosis of the kidney does occur in children, and in such cases the indications for surgical treatment are the same as in the adult.

There are other urological conditions in childhood, such as pyelitis, which frequently occurs. Stone in the kidney, pyelonephritis, hydronephrosis, frequently associated with hydro-ureter, and other pathological conditions are seen in children.

I do not want to be misconstrued about these examinations. I would not subject a child to such examinations unless necessary. But I contend that there are definite indications for urologic examination with the cystoscope, ureteral catheter, pyelography, and other aids in children. Also such aids should be used in the treatment in some cases. In cases of pyelitis, for example, that have had the foci of infection removed and other treatment for a reasonable length of time, I think the child should be cystoscoped

and ureter catheterized. This can be carried out without difficulty and with no injury and may save the kidney from permanent damage and in some cases save it from total destruction.

As to Dr. Johnson's method of examining urine for tubercle bacilli, I have not tried that method, but I dare say it is very good. The method which I have followed is the technique of Dr. Barney, of the Harvard Medical School. I centrifuge the urine at low speed for a few minutes, then take the supernatant urine and centrifuge it again for a half hour or more at high speed. The smear is made from this sediment.

A GENITO—URINARY ROUTINE SUGGESTED AS PRACTICAL FOR THE GENERAL PRACTITIONER.

By M. H. Wyman, M. D., Columbia, S. C.

A few general remarks will be made, then venereal diseases will be briefly discussed.

While searching for material to justify a paper the writer decided to present some facts and conclusions he obtained by reviewing the findings in the urological examinations of 500 ex-service men who have filed claims for compensation against the Government.

In the examination of these cases a routine, each step in definite sequence, was used. Any physician by following the same routine can quickly and accurately gain valuable information about the genito-urinary system of his patient, even without the use of special laboratory aids, such as the microscope.

First, patient's complaint and history is noted, inquiring especially about venereal diseases, and definite urinary symptoms. Second, blood for a Wassermann is taken: third, a search is made for a urethral discharge, sores or any abnormality of the external genitalia; fourth, urine is voided in two glasses and a note made of the pres-

ence of shreds, blood, etc., then a complete urinalysis is done; fifth, prostate is palpated and massaged per rectum: the prostatic secretion thus expressed is placed on a glass slide, spread out, and examined while wet for pus, if a microscope is available, if not, it is allowed to thoroughly dry and then it may be mailed to a laboratory where it can be stained and a report made not only of the presence of pus, but of micro organisms also.

The question is—How much practical value will this above outlined routine be to a busy practitioner who does not have the use of a microscope? We believe in the microscope, use it constantly and recommend its use to all when possible. The following observations were carefully made and accurately verified by the microscope. All of the 500 men examined voided into two clear clean glass receptacles (a clean fruit jar makes a satisfactory receptacle), this urine was agitated and held up against a dark back ground in a good light and a note made whether or not shreds were present. Then every man had his prostate massaged and the expressed secretion examined microscopically for pus.

In reviewing these 500 written reports made to the Government on these examinations, we found, practically without exception, an infected prostate in those men who voided shreds and normal prostates in the men who voided clear urine, free of shreds. This observation is of immense practical importance, now that focal infections are somewhat understood, for it changes the interpretation we formerly held that shreds were a natural sequence of Gonorrhea. We realize that strictures of the urethra, an infected kidney or bladder may send out pus shreds, but without exception in our 500 cases, the prostate was infected also. In other words, in 99% of our male patients, by our naked eye alone, we can diagnose urinary infection by finding pus shreds in their voided urine, and can

also be reasonably certain that we have no infection of the genito-urinary system in those men who void clear urine, free of shreds. It is necessary to be very careful and painstaking in looking for shreds for if the light is not just right small comma shreds may be over looked. These comma shreds are very important, however, for they come from the mouths of the prostatic ducts.

When the urine voided in the second receptacle contains shreds also, one can be certain that he has an infection higher in the urinary tract than the urethra, that is, in the bladder or kidneys, or else that the posterior urethra and prostate are very acutely involved.

Female patients should always be catheterized, because pus found in a voided specimen may come from the vagina. Remember—urine clouded with phosphates becomes clear when thoroughly acidified; while urine clouded with pus does not clear on the addition of an acid, but becomes syrupy and stringy on the addition of an alkali, such as sodium hydroxide.

The cause of an infected prostate, while usually due to a previous Gonorrhea, may be any germ that invades the human body. The colon group accounts for the majority of the chronically infected.

The symptoms of prostatitis are acute and chronic; local and systemic. You can consult any genito-urinary text book for a detailed symptomatology, but we would like to stress the importance of ever regarding the prostate as a potential focus of infection, just as you do tonsils and teeth. Your most brilliant results from prostatic massage will be in those patients complaining of pain in the lower back or some sexual disturbances, such as premature ejaculation or loss of sexual power.

The only treatment indicated in prostatitis is relieving the gland of its infection. Prostatic massage, using gentle, firm pressure with the finger, but never bruising,

offers practically the only hope to cure. Massages should not be too frequent, every five to seven days is usually sufficient. Hot urethral and rectal irrigations, as well as, urethral dilatations are beneficial.

Venereal diseases are just three in number, Gonorrhea, Syphilis and Chancroids.

Gonorrhea—If a patient presents himself complaining of a urethral discharge, even though he admits an exposure, we should always make a smear and have a laboratory verify the infecting organism. Many men in the army were unjustly punished on account of urethral discharges which were non-specific in their nature. In a new Gonorrheal Urethritis the first voided urine is usually clouded with pus.

Just a few general points in treating Gonorrhea will be mentioned—first, be sure that the external meatus is of sufficient size to allow free drainage from the urethra; never allow a man to use cotton under the foreskin to catch the discharge, for this dams back the pus and might make the infection extend into the posterior urethra. With reference to medicinal agencies, drugs by mouth are only slightly beneficial and then for their soothing effect principally. Santal-wood-oil is the only drug the writer ever prescribes by mouth, but water should be forced freely.

Dr. Edward Keys, Jr., of New York made the following statement to the writer in a personal conversation; he said:

"The important thing we have learned about Gonorrhea in the last twenty years is not to over treat a case." In our office in Columbia we see our patients once a day only, and they receive no treatment except that administered in our office. Permanganate of potassium is the one drug that stands out preeminently ahead of any other drug to be used locally in the urethra. In addition to the irrigations of the anterior urethra, during the first few days of the infection, we inject by a hand syringe a weak argyrol or acriflavine solution. Usually

within the first week we elevate our irrigator causing a stronger gravity force and allow the permanganate of potassium to enter through the posterior urethra into the bladder. We contend that it is the delayed, rather than the too early treatment of the posterior urethra, which allows the infection to gain headway and travel into the prostate and on down into the epididymis. If a patient has pus shreds in the second voided urine, it has always been agreed that we should irrigate the posterior urethra, but if you wait for the appearance of shreds in the second glass you will frequently be too late to head off infecting the prostate and epididymis. Usually, after two or three weeks of irrigations, especially when there are shreds in the second urine, we commence gentle massage of the prostate. **THESE MESSAGES SHOULD BE CONTINUED, LENGTHENING THE INTERVAL BETWEEN THEM, UNTIL THE PROSTATIC SECRETION IS FREE OF PUS AND VOIDED URINE IS FREE OF SHREDS.** Before a man is discharged as cured a sound of not less than 27 F caliber should be passed through the entire urethra to be certain that no strictures are present. The complications of Gonorrhea, such as acute prostatitis, epididymitis, arthritis or periurethral abscesses may or may not need surgical interference, frequently however, nature is able to take care of these complications if the patient is allowed to rest. Limited time prevents a fuller discussion of treatment; but a doctor assumes serious responsibility if he attempts to treat a case of Gonorrhea and is not prepared to assure his patient that he has been entirely and positively freed of all the infecting organisms before being discharged as cured.

Venereal sores—I quote from a manual of Military Urology used by the American Expeditionary Forces in Base Section No. 2, France.

"It must be borne in mind that over 50% of what clinically appear to be soft sores or chancreoids are in reality mixed infections. That is, they are both chancreoids and chancres; the syphilitic manifestations not appearing until later, sometimes not until the soft sore has healed. For this reason great care should be exercised in diagnosing sores and resort should always be had to microscopic examination."

"Diagnosis; specimens from all sores will be examined once and in negative cases twice with a dark field apparatus. If it is impossible on account of distance to have this examination made, specimens to be stained will be sent to a laboratory for microscopic examination."

"The preparation of specimens to be stained is as follows:

Cleanse the sore with a piece of gauze and sterile water, being careful to prevent bleeding. Dry with gauze and grasp the ulcer at its base, between the thumb and forefinger, pressing gently but firmly until a droplet of the serum exudes from the surface. A clean glass slide is touched to this droplet and the material that adheres is spread over an area the size of a ten cent piece. This smear is allowed to dry thoroughly and mailed to a laboratory. Do not fix in flame. Two such specimens will be made from each case."

"In all cases of venereal sores a Wassermann reaction will be made immediately and again in three weeks from date of appearance of sore, and if negative, repeated once a week for at least three more weeks. If all preceding examinations and Wassermanns are negative an additional Wassermann will be made three months after the appearance of the sore."

Treatment of Chancreoids—"There is no entirely satisfactory treatment for this troublesome infection, but the following points will be observed.

In general, these ulcers will be treated as ordinary infected wounds.

Keep the ulcer clean by frequent washing with plain water. The oftener this can be done the better.

Powders produce crusts, prevent drainage, are not beneficial and will not be used.

No cauterization of any kind will be used. In the vast majority of instances such treatment is positively harmful.

All ointments will be avoided.

The foreskin will be drawn forward after the treatment is finished, leaving a small strip of gauze under the foreskin to encourage drainage. When it is impossible to retract the foreskin, frequent sub-preputial irrigations with salt solution or plain water will be instituted, using a small catheter or irrigating nozzle. By thus encouraging free drainage, from a venereal sore, is the surest way to prevent a bubo complication.

Foreskin incisions will not be made except in extreme cases, and when it is deemed advisable to use surgical interference, two lateral incisions are preferable to the usual dorsal incision."

Recently in treating chancreoids in our office we have used a solution of 20% copper sulphate followed by an application of the high frequency current, this treatment although rather radical has been found very satisfactory.

Syphilis—Perhaps this black plague directly and indirectly causes more mental and physical suffering, economic loss, lunacy, degeneracy, and crime than any other disease with which society has to contend. As a community problem syphilis is terrible, yet in treating an individual case the results are usually so brilliant that it becomes a very satisfactory disease to handle. As soon as the diagnosis is once established the arsenic preparations, mercury and potassium iodide are our specifics and no time should be lost in commencing their use. Depending on the stage of the disease, the amount and duration of treatment will vary in each case. No decision a

physician has to make is more important than to answer a leutic patient, conscientiously, the following:

Am I cured? Is there danger of my ever developing cerebro-spinal syphilis? Can I marry and will my children and grandchildren be free from the dangers of inheriting syphilis on account of my infection?

A scientific and positive answer cannot be given to the above questions until a sufficient time has elapsed during which period the patient has remained clinically free of symptoms, repeated blood Wassermanns must have been negative and finally the spinal fluid obtained by lumbar puncture must have been declared normal.

In Conclusion—Look carefully for shreds in urine voided by your male patients, if present, interpret them as meaning an infected prostate, which of course does not exclude the possibility of some other urinary organ being infected also. Shreds in connection with certain suggestive symptoms will strengthen your suspicion of a urinary infection. Finally call on a laboratory or a urologist to confirm your suspicion. By so doing more diagnoses will be made, more suffering prevented and more patients cured of their complaints.

DISCUSSION:

Dr. F. A. Coward, Columbia:

Dr. Wyman read his paper very hurriedly, and I do not think that several of the important points were caught. The first thing is for the general practitioner not to cauterize venereal sores. That is the old time method. We have a tremendous responsibility in allowing these sores to go undiagnosed, and many physicians do that very thing.

So far as the dark field goes, if you haven't it; it does not make any difference. If you have a dark field, don't scrub the ulcer with gauze and squeeze out serum, as the books tell you, but take a hypodermic needle and rub it under the edge of the ulcer, and you will get at least a drop of ser-

um free from blood and free from contamination. Another thing, after a diagnosis of syphilis is once made, never discharge the patient until you are sure that the spinal fluid is free from the germ, by the Wassermann. That is, of course, after several years' treatment.

Dr. A. H. Hayden, Columbia:

During the health week put on by the United States Public Health Service we had the privilege of having in Columbia one of our greatest specialists in venereal disease. His report was very discouraging, because he would not admit that we could be absolutely satisfied of any case of cure. That is very disappointing, because I am one of the few, at least, who believe that under the proper methods of treatment we do have many cases of cure. If we do not, God save the country.

My experience has led me to believe that the majority of so-called gonorrheal cases are not true gonorrheal infections. A true gonorrheal infection I consider one of the most serious happenings that could fall to the lot of any individual. I consider that most of the so-called gonorrheal infections are only benign cases of non-specific-urethritis.

Dr. Wyman speaks of catheterization as a determining factor in these venereal problems. I have noted the fact in past years that very little attention was paid to cleansing, "and I can recall but one or two instances where the precaution was taken of cleansing the external genital or the beginning of the vaginal tract, the portions of the vaginal just within the labia. When we refer to pus found in the urine as "having its possible origin in the vagina," I think that it is very essential to find if the specimen, even if obtained by catheterization, was obtained under strictly aseptic precautions.

Another point is this—we speak of gonorrheal infections of middle or deep portions of the urethra, and it has never been determined how much of the infection in the deep or middle portion is conveyed by the catheter. We would like to hear something from the specialists relative to the determination, after pus is found after antiseptic procedure, as to whether the pus comes from the urethra, the bladder, or the kidney itself. In catheterization we have to recognize the fact that under the best precautions

the bacteria may be carried into the deep parts.

Dr. Wyman, closing the discussion:

Dr. Hayden has asked one or two questions which I would like to answer. If pus is found in the catheterized female urine, especially if the first two or three drops are not used, it means a true infection, either in the bladder or above it.

Occasionally you will have a patient with a non-specific urethritis. We had a case recently, a male case. I examined his copious urethral discharge two or three times and did not find any gonococci, and then I turned him over to Dr. Routh, our bacteriologist who also failed to find gonococci. The urethritis cleared without treatment.

HUMANS WITH ESPECIAL REFERENCE TO ASTHMA AND HAY FEVER

By Hal M. Davidson, A. B., Phar. B., M. D., Atlanta, Ga.

The study of hypersensitiveness was begun quite accidentally by Richet, who, in 1898, attempted to immunize a dog against the toxin of a sea animal by injecting at intervals gradually increasing doses of that toxin. Contrary to the expectations of the experimenter, the dog was killed by the second injection which was much smaller than the known lethal dose of that toxin. The reaction that preceded the death of the animal was unknown to Richet, and, to designate it, he coined the word anaphylaxis, meaning against protection. In 1903, Theobald Smith observed a fatal reaction in a guinea pig produced by a second dose of a serum not within itself toxic. (1) Otto, a co-worker of Erhlich, and (2) Rosenau and Anderson of this country further elaborated these studies. In 1906, Wolf-Eisner suggested that hay fever was a reaction similar to anaphylaxis. Four years later, (3) Meltzer began the study of bronchial asthma from the same standpoint. Shortly

afterwards, (4) Cooke began to prepare fluid extracts suitable for intracutaneous tests and for treatment by hypodermic injection in cases of hypersensitiveness, (5) Schloss in 1912 described the scratch method of diagnosis in which the dried proteid extracts were used.

As experimental study advanced, it was evidenced that a difference existed between natural hypersensitiveness in humans and that produced artificially in animals as a whole. To differentiate these, Coca applied the term "allergy" to natural hypersensitiveness in humans. He described the meaning of the word as a condition of hypersensitiveness in which an antibody-antigen reaction had not been demonstrated to be the underlying cause of the symptoms characterizing the condition. The word allergy was first used by Von Pirquet in the same sense as anaphylaxis. Doerr later applied the term to all the phenomena of altered reactivity, whether to antigenic or to non antigenic substances. In the classification by Coca the term allergy included asthma, hay fever, urticaria, angioneurotic edema, some forms of eczema and erythema, food and drug idiosyncrasies,—including gastro-intestinal substances caused by the same,—serum sickness, dermatitis venenata, and sensitiveness of infection as typified by tuberculin hypersensitiveness. Suspected of belonging to the same class are certain cases of epilepsy, migraine, and psoriasis. In a paper presented by Cooke and Coca before The Association of Immunologists in May 1922, the following classification of hypersensitiveness was used:

Hypersensitiveness (Immunological)

A. Normal

(Affecting the majority of humans)

(1) Serum sickness.

(2) Dermatitis Venenata.

D. Abnormal

(1) Anaphylaxis (experimental)

(2) Hypersensitiveness of infection.

(3) Atopy, or inherited hypersensitiveness, as evidenced by the asthma, hay fever, agioneurotic edema group.

From data available at the present time it has been estimated that fully ten per cent of all humans suffer from some form of inherited hypersensitiveness. Cooke has shown that this hypersensitiveness is transmitted according to the Mendelian law and that it is a dominant characteristic. It is often transmitted to the offspring in a different form from that in which it is manifested in the parents. If one parent only is hypersensitive, thirty-eight per cent of the offspring will inherit; while, if both parents are affected, about sixty-eight per cent of the offspring will manifest some form of hypersensitiveness.

The forms of hypersensitiveness occurring most often and causing the greatest discomfort are hay fever and asthma. For this reason, these diseases will be discussed more fully than their allied forms.

Bostock of London first described hay fever in 1819. (6) Blackley, also of London, published a paper in 1873 in which he declared pollens to be the cause of hay fever and described typical attacks he had produced in his patients of inhalations of the pollens. He used the cutaneous tests with the pollens as a means of diagnosis. At the present time, diagnosis of the causes of hay fever are made by three methods of testing, namely, the intracutaneous, the cutaneous or scratch method, and by the ophthalmic reaction caused by instillation of the fluid extracts into the conjunctival sacs. Of these methods, the intracutaneous has proven the most sensitive. Reactions in the skin are classified as slight, moderate, and marked according to the size of the wheal produced and the length of the pseudopod-like projections extending from it. Practically all of the pollen extracts are used in the liquid form. Many different extracting agents are being used. Clock has described a method of making a gly-

cerolated pollen antigen which remains stable indefinitely. This is standardized by the complement fixation method. According to the methods of Cooke and Coca, extracts are made with normal saline to which have been added certain salts to act as a buffer, and a small percentage of phenol, to act as a preservative. These extracts are standardized according to their nitrogen content by the Kjeldahl method. Clinically their reactivity is in proportion to this content. Treatment is carried out with the same solutions used for testing. The dosage is regulated according to the strength of the solution necessary to produce a marked reaction in the skin. This gives an index both to the minimum and to the maximum dosage necessary. Treatment should be started at least four weeks before the beginning of the hay fever season. In every sensitive cases, it is preferable to begin six weeks ahead. The patient's tolerance for the extract is gradually increased to the necessary point as indicated by the tests and the maximum dose should be given once a week for the remainder of the hay fever season. The phenomenon of lessened sensitiveness produced by injections of proteid extracts in cases of hypersensitiveness has been called hyposensitization (7) because complete desensitization in the human cannot be obtained. Most patients are obliged to take treatment every year as the hyposensitization is temporary. In a few cases it has been known to last three years after one series of injections. About ninety per cent of all cases of hay fever are benefited by treatment and of these between thirty and forty per cent are totally relieved, showing no symptoms of the disease or only slight manifestations as compared with former seasons. Ten per cent of all cases are not alleviated. It is probable that in these cases, the cause has been incorrectly diagnosed. The age of the patient and the duration of the disease are no index to the

results that may be expected from treatment. The writer has recently reported a case in a man sixty-five years of age who had suffered with hay fever every fall since the age of remembrance and with both hay fever and hay asthma for the last six seasons. His condition was complicated by severe kidney and cardiac lesions. Positive tests to ragweed pollen were obtained. Although treatment was instituted less than two weeks before the beginning of the hay fever season, the patient was completely relieved and gave no manifestations of either asthma or hay fever.

Similar to but usually less severe than the hay fever caused by the pollens is the coryza caused by hypersensitiveness to such inhalants as flour, rice powder, orris powder and the like substances. This coryza may come at any season, being dependent only upon contact between the patient and the offending substance. Diagnosis and treatment are essentially the same as in hay fever.

The causes of bronchial asthma are determined as in Hay fever by either the intracutaneous or the scratch tests. Brown (8) in a series of seventy-eight cases of asthma known to be clinically positive to certain proteids has shown that the tests made with the fluid extracts of Cooke and Coca gave positive reactions in one hundred per cent of the cases. Cutaneous or scratch tests with the same solutions gave positive reactions in eighty-two per cent; while, scratch tests made with the dried proteid extracts prepared by the method of Wodehouse gave positive reactions in only fifty per cent of the cases. Occasionally the history of the case will suggest the cause of the disease. The patient's idea of the cause is usually erroneous and as a rule is based upon some popular belief concerning the causes of asthma. Cooke considers that at least seventy per cent of all cases of asthma are caused by powdered

substances inhaled by the patient. Walker reports his largest group of cases in the food class. Best results in the treatment of asthma are produced by preventing contact with the cause of the disease. If this can be done, the asthma ceases at once and no further treatment is necessary. If this contact cannot be prevented, hyposensitization is necessary and is accomplished as described in the discussion of hay fever. Substances that cause asthma comprise many different forms such as foods, emanations from all animals and fowls with which man comes in contact, hay dust, house dust, certain drugs, pollens, glue, and infecting bacteria. Aspirin has proven a fairly common cause of asthma. Cases caused by delphinium, ipecac, and senna have been reported. The present methods of diagnosis and treatment are efficient in approximately seventy-five per cent of the cases of asthma from all causes.

Cases of epilepsy, migraine, and psoriasis have apparently been cured by the removal from the diet of some food to which the patient has given a positive skin reaction. The cases observed have been so few that no definite conclusions can be drawn. They merit further study.

Serum sickness and dermatitis venenata are common to a large part of the human race. They have been called normal forms of hypersensitiveness and are not supposed to be subject to inheritance.

Urticaria, angioneurotic edema, and eczema are not uncommon diseases. In many instances patients suffering from these diseases have already learned to avoid certain foods. In other cases no cause for the disease can be determined from the history. The reason for this is that the time of the appearance of the reaction varies from a few minutes to six days after the ingestion of the exciting cause and may remain present for at least three weeks without further ingestion of the causative agent. There has been reported

a case of angioneurotic edema of the foot caused by eating codfish that illustrates the above fact. An elderly female had suffered from swelling and itching of one foot for several months. She was finally tested and gave a reaction to fish. She had been eating codfish once a week only. She omitted this from her diet and the edema disappeared three weeks later. The patient remained free of the trouble for a month and she was requested to eat codfish again. The swelling and itching appeared five days afterwards and remained for three weeks after the time of ingestion. This test was repeated and always gave the same results with exception of the fact that the swelling sometimes appeared within three days after the patient had eaten the fish. A case of eczema we are now observing with a skin specialist of this city apparently represents the same type of hypersensitiveness. Positive skin tests to rice and navy beans were obtained. The patient had been eating beans occasionally and rice every day. Omission of these articles from the diet apparently caused the eczema to disappear within a few days although it had lasted for over six months with very little variation. Three weeks later the patient ate some puffed rice. Three days afterwards, her arms began to itch and six days after she had eaten the rice the eczema again reappeared. Since this time it has never been entirely absent. During the period following the patient has eaten rice soup twice and each time an acute exacerbation of the eczema followed. Apparently the patient has multiple sensitization not fully diagnosed or the effects of the rice continues from the time of one ingestion to another. The case resides out of town and cannot be watched as closely as we would have liked. It is a well known fact that babies suffering from eczema often develop asthma later in life. It is not unusual to have a return of an old

eczematous lesion after testing a patient with proteid extracts to which they are sensitive. A case of asthma sensitive to wheat gave a delayed constitutional reaction twelve hours after the intracutaneous tests were made. This reaction consisted of an exacerbation of an attack of asthma already present and a return of eczema on her right ear. The patient had been free of eczema for several months. In this case the eczema remained only a few hours. The above observations on angioneurotic edema and allergic eczema will probably illustrate like principles in cases of urticaria and erythema.

Experimental studies of the above phenomena, begun but a little over ten years ago, have rapidly developed until at present they are in progress in every medical center. Results have proven that many cases hitherto considered as practically incurable can be cured or greatly benefitted. The future promises even greater success in the treatment of the above diseases and this branch of medicine presents an often neglected field for interesting study.

Summary.

1. It has been demonstrated that asthma, hay fever, urticaria, angioneurotic edema, and certain cases of eczema and erythema are allied reactions, depending upon the same mechanism in the body for their production.
2. The cause or causes of a large percentage of these cases can be determined by skin tests with proteid extracts.
3. Of the methods used in testing, the intracutaneous has proven the most sensitive.
4. These diseases may be entirely relieved if contact between the causative agent and the patient can be prevented. In cases where this is impossible, the majority may be either prevented or greatly alleviated by treatment.

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PARANASAL SINUSES OF CHILDREN WITH SPECIAL REFERENCES TO OCULAR SYMPTOMS.

By *E. W. Carpenter, M. D., F. A. C. S., Greenville, S. C.*

The importance of these cavities has long been recognized and discussion of their status in relation to Anatomy, Pathology and voice production still goes merrily on. They are a fertile field of study. Their limitations and contours continue to interest students of Anatomy, who have accomplished a vast amount of research

work and have come to the conclusion that each set of sinuses is a law unto itself, that to properly understand their variations and vagaries, we must be able to visualize the biological stages of development through which they have passed.

There are no standards or normal types by which we may measure all sinuses, for the sake of brevity in teaching we have been compelled to standardize and adopt composite types. To successfully assume the relation of a surgeon to the paranasal sinuses, one must become a profound student of the biology of the paranasal sinuses. These cavities may perform very useful functions, but we are not able to identify these functions. It is possible that during certain stages of development the sinuses were a very important part of our equipment for existence and the Vomero-nasal organ is probably a rudiment of this arrangement. We do know that the sinuses are an endless source of danger and discomfort. For once one of these begins to suppurate the nearest or most distant organs or tissues of the body may fall victims to this infection. We have long recognized the fact of their becoming purulent cess pools of pus in the adult, but we have been tardy to discover the frequency of this and still more slowly are we awakening to the enormous number of neglected suppurating sinuses in children.

Many Oto-Laryngologists have contracted the habit of removing every Adenoid and tonsil which crosses their visual paths, in fact in many of the smaller centers the chief topic of comparison between Laryngologists is their skillfulness in removing tonsils. This I fear is almost an obsession with many specialists. Often children are presented to them with the history of frequent colds in the head and the sum total of their advice after a "careful" study of the case is to remove the adenoids and tonsils. Frequently to their chagrin this measure does not cure the malady. The rea-

sion lies in the fact that they have overlooked stagnant cess pools of pus in these little patients sinuses. If we would only make the study of these areas a routine practice in our "careful" studies of each case, we would be surprised by discovering the frequency of their involvement.

Our experience is that the sinuses are as frequently diseased in children as adults but that the chronic type of infection is less frequent in children. Once the sinuses of children become infected a predisposition is established. In children resolution occurs and the cilia reassert themselves more rapidly than in adults. Infection may reoccur until the cilia lose their ability to function, then degeneration of various types in the mucosa become more or less permanent and chronic sinusitis is established.

We do not assert that children do not or cannot have chronic infection of the sinuses, for this does occur and we believe that, many adults who present themselves with chronic sinuses can trace their infections to childhood. Patients often say that "they have been subject to colds all their life."

DIAGNOSIS

The first impression of one who is not familiar with sinus work in children is to say that it is impossible. We admit that it is difficult and would emphasize the fact that in obscure cases the diagnoses cannot be made off hand. One must often exhaust all resources of the Rhinologist and a good laboratory worker and in the end admit that a good vacuum apparatus and a rhinoscope are the most important accessories in making a diagnosis. Pronounced disease of any or many of the sinuses may be present without any subjective nasal symptoms, repeated study of these cases by the most approved methods may fail to establish a diagnosis of sinus disease. It takes more than one color to paint a picture

so it requires more than one set of symptoms or methods of examination to establish a diagnosis. The *ocular symptoms* in children are often the first to direct our attention to the sinuses, these symptoms may be headaches, asthenopia, dimness of vision, disturbed visual fields, blurring of the margins of the nerve heads, infection of the orbit, excessive lachrymation, disease of the lachrymal apparatus, catarrhal conjunctivitis, ocular palsies, neuralgias. These conditions are all inflammatory in nature and are caused by the continuity of the ocular apparatus and its appendages to the infected nasal sinuses. It is possible that metastatic infections may be responsible in some instances for some of the above conditions. Infected sinuses are just as potent a cause of focal infections such as arthritis, endocarditis, and nephritis in children as in adults.

SURGERY

Because of the probability of the vestigial theory of the sinuses and because of less abundance and robustness of the epithelial lining, only conservative surgery should be applied in children except, in cases where bone necrosis or sequestra are present. Conservative surgery consists of sufficient ventilation and drainage and in time this will restore most diseased sinuses to a reasonable statute of healthfulness.

A few years ago one of our Middle West Oto-Laryngologists began a systematic study of these organs in children and his results have opened a formerly unsuspected field of disease.

The reason for our neglect of this important matter is that so many writers of our text books have been content to accept statements of older authors to the effect that in infants and small children the sinuses were rudimentary and undeveloped and that they were seldom diseased.

The following paragraph is a quotation from the writings of a modern Rhinolo-

gist which could be multiplied many times. "The nasal accessory sinuses give us very little concern in early childhood and almost none during infancy. The maxillary sinus is present in but a rudimentary form from birth, its permanent shape and normal position are not obtained until after the eruption of the permanent teeth. The frontal sinus is not present at all at birth, it makes its first appearance at about the second year and about the eighth year assumes the form of a distinct cavity. The ethmoid and sphenoid sinuses are present at birth, but like the others, develop slowly and do not assume their complete form and size until puberty or even later."

One of the most recent investigators says the size of the Sinuses are as follows:

Maxillary Sinuses.

Birth—7 x 4 x 4 m. m.

Two years—20 x 10 x 8 m. m.

Adults—30 x 18 x 19 m. m.

Frontal Sinuses.

One year—2 x 2 x 3 m. m.

Five years—8 x 3 x 6 m. m.

Sphenoid Sinuses.

One year—2 x 2 x 2 m. m.

Five years—7 x 6 x 4 m. m.

Ethmoid cells.

Birth—5 x 2 x 2 m. m.

Five years—7 x 7 x 6 m. m.

The above is from J. P. Schaeffers recent book. This shows that from Birth the sinuses must be reckoned with rather than to be ignored as undeveloped or too small to become infected.

Treatment—The vacuum bottle is of the greatest value. Children do not fear it and with a little ingenuity and comprehension of child psychology it can be generally applied successfully.

Surgery—is sometimes necessary and should never be attempted without careful Roentgenographic study. The order of frequency of infection in our observations are first the Ethmoids, and secondly the Antra, thirdly the Frontals. We have never been positive of a Sphenoid infection under fifteen years of age.

Many useless refractions have been and will continue to be done without benefit until the Ophthalmologists are educated to the frequency of Sinus disease in children and the relation of these infections to Ocular discomfort recognized.

Report of cases (Omitted from this paper but presented at the meeting.)

OBSTETRICS AND GYNECOLOGY

R. E. SEIBELS, M. D., Columbia, S. C.

Rest in the treatment of Pelvic Inflammatory Disease The treatment of pelvic inflammations in women is becoming more conservative as we have learned more about pathology and the processes of repair after inflammation. Acute pelvic inflammation is but seldom operated upon nowadays, except local drainage of abscesses; the majority of gynecologists prefer to wait until the process has become less acute and the infection has been walled

off, both in order to save mortality and post-operative morbidity, and also to prevent unnecessary operating.

The most important feature in the treatment of pelvic inflammation of whatever type, is rest. In the acute and sub-acute stages, rest is essential. In the chronic stage it is often of great benefit.

Objection is often raised by the patient that it is impossible for her to go to bed and undergo the two or three weeks of rest

that is advised. But, we can show that it is a question of two or three weeks in bed and say, as long a period of reduced activity, without operation; or the same enforced rest with operation.

There are a few points of importance in connection with this conservative treatment.

1. Be clear, that "the rest is in bed, all day and all night."

2. Do not use carthartics for the constipation but correct it with diet, mineral oil, and enema.

3. Drink three pints of water a day in addition to other fluids.

4. Avoid douches except when they can be given under competent supervision. The douche often carries infection up into

the pelvis.

5. For the abdominal pain, use ice bags rather than morphine.

After this period of rest has accomplished a quieting of the process, as evidenced by absence of pain, tenderness and fever, do a pelvic examination and handle the tubes a little roughly and see if there is any reaction. If none allow up and gradually increase the activity. This increase of activity should be like the exercises for cardiac and tubercular patients, graduated under supervision.

Whether or not one uses local treatment of the cervix and vagina in addition to the above, depends somewhat on circumstances, but the rest feature is of the first importance.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

Caulk, John R.: Treatment of Undescended Testicle. Surgery, Gynecology and Obstetrics, November 1922, Vol. 35, No. 5.

Caulk states that Wriesburg's statistics show that 30% of infants at birth have undescended testicles. The majority of these descend to the normal position within a few days or weeks of postnatal life. Others gradually come down later on during the first year. If, however, the condition persists for one year, the chances of normal descent are exceedingly meager. There are rare instances where the testicle has descended after fourteen years of age or even in the twenties following a sudden strain.

The following statistics are given by the author: Coley, in the Hospital for the Ruptured and Crippled, found 3% of un-

descended testicles in boys under 14 years of age, 2.2 per cent between 14 and 21, and only 0.2 of 1 per cent after 21. Marshall found 11 cases in 10,800 recruits. And Hempel said, that of 7,000,000 Austrian recruits, 0.2 per cent were affected. In other words, we may expect this anomaly in two cases out of every thousand, a condition of sufficient frequency to demand our careful consideration. This condition may be unilateral or bilateral. In infants, it is usually bilateral. Within the first few months, 60 per cent are bilateral. In adult life it is more commonly unilateral.

The writer further states that owing to the unsatisfactory result in former days in the handling of this unfortunate condition, pediatricians, particularly, have been prone to advise against surgical correction. But since there have been such pleasing re-

sults through surgery in recent years, this discouraged attitude on the part of the pediatricians and clinicians should be changed, and we hope for their co-operation in this phase of surgery in order to protect such a number of individuals from the consequences which may ensue to the testicle from its malposition.

The following reasons are given for advising the transplantation of the testicle. Practically every undescended testicle is associated with actual or potential hernia, and this, of itself, should demand a surgical correction. Moschcowitz stated that 100 per cent have hernia. Coley, in 415 cases, found hernia in every instance but 3. In the author's 35 operative cases, 32 had definite hernias. Odiorne and Simmons find only 57 per cent with associated hernia. On account of the hernia, many of these individuals have worn trusses. This, of course, should be most positively condemned, since by its pressure effects it is almost certain to insure disaster to the testicle.

As a second reason, pain due to the pressure of the surrounding muscles upon the gland is often of sufficient importance to warrant operation, and on account of the exposed position of the testicle in the region of the external ring, trauma is apt to occur with its ill effects.

The need of preservation of an organ so important to the human economy hardly needs any comment.

It is a well-established fact that the undescended testicle suffers pronounced change in function and histology. The spermatogenic function weakens and usually disappears. Eccles and Uffreduzzi claim that but 10 per cent of the sperma-

togenic cells remain in the adult. Bland Sutton claims that after puberty, practically all the spermatogenic cells are lost. There are, however, instances of fertility in double cryptorchids.

Torsion and strangulation of the cord occur almost entirely in the undescended organ. The susceptibility of the undescended testicle to tumor formation has created considerable debate, and has been handed to us, really as a tradition. Cunningham collected 452 cases of tumors of the testicle. 412 occurred in testicles normally placed and 40 developed in the undescended organ, but we must remember there are 500 times as many normally placed testicles as undescended ones; therefore, this proportion seems to express a decided inclination of the undescended testicles to form tumor.

It, therefore, seems reasonable to attempt to protect a testicle from such pathological changes and give it every chance of normal growth, and while many transplanted testicles may not develop spermatogenic function, Caulk believes a fair percentage will, if correctly placed at the proper time.

In regard to treatment, he states that in early years, that is up to six years, the testicle may be encouraged by gentle massage and pressure from above and behind as was advocated years ago by Lengenbeck. Should it not descend either spontaneously or through this encouragement, surgery should be done. The time of election for the operation is certainly before puberty. Most authors believe in not operating on young children, certainly not before three, on account of inability to keep them dry. They agree that the best age is between six and twelve.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

“Menders of the Maimed”—Page 52-53.

It is when we watch Thomas undertaking the treatment of deformities of the foot that we recognize in him a true, if unconscious, disciple of Hunter. He bases his treatment on a knowledge of function, and with the sure touch of genius hits at once on the simplest and most effective means of putting his principle into practice. A woman, Mrs. E., brings her son for treatment in an early stage of flat-foot. He informs the mother first, that “steels” are not required (she had thought otherwise); secondly, that the remedy for the existing condition is to assist the boy to continue the inturn of his foot; thirdly, that hitherto the boy was making, by his will, directed to his calf muscles, an effort to avoid deformity; fourthly, that these muscles, subjected to too continuous an effort, would become tired, then probably the foot might rapidly splay, other muscles then coming into play, but only to aggravate the difficulty; that the remedy is simply to provide a particular form of boot heels, and that leather will do the labour which, at present, is continually thrown on certain muscles, which are not only doing their own work, but are sustaining a weight which ligaments for a time are unable to sustain. The mother, however, remained unconvinced. “What!” said she, “only to put a bit of leather on his shoes and still make him walk with his toes turned in?” Thomas made another attempt “to explain why merely wearing a moderately high heel well sloped, so that the other depth of the heel of the boot should be three-quarters of an inch and the inner edge one inch, was all-sufficient for a pair of feet in the ini-

tial stage of splay.” Thomas learned “crooked-heel” method of treatment from watching the development of flat-foot in patients who had sustained Pott’s fracture. In such cases he assisted the overstrained muscles of the instep by “crooking” the heel of the boot, so that the weight of the body was thrown towards the outer side of the foot. But the woman, like Naaman of old, “was wroth and went away.” In an equally simple and effective manner he gave rest to the metatarsophalangeal joints of the foot, particularly in cases of hallux valgus, by the simple means of throwing a raised bar across the sole of the foot. By this simple method the strain in walking falls directly upon the heads of the metatarsal bones instead of upon the toes and their basal joints.

H. O. Thomas practiced surgery at Liverpool fifty years ago; many of the principles enunciated by him are permanent and as true today as they were then.

CARCINOMA OF THE COLON

A. A. Strauss in the *Surgical Clinics of North America*, 1922, Vol. 11, P. 845, describes an extra peritoneal technique for operating for carcinoma of the colon, particularly the Sigmoid and upper rectum.

Carcinoma of the colon is of slow growth, is recognized early by the X-ray, metastasizes late, and is usually of the scirrhus type.

The hazard of colonic surgery is increased over that of small intestinal surgery principally because of the presence of colon bacilli in the large bowel.

He states that the ideal surgical treat-

ment for carcinoma of the colon is resection "en masse" with end to end anastomosis and he believes that leakage along the suture can be prevented or greatly lessened by tacking the omentum over same.

He describes in detail resection of a portion of the lower sigmoid and upper rectum which contained a neoplastic growth, and then through the sphincter ani, he pulled the upper end of the remaining rectum.

After this was done he pulled down through the inverted rectum the lower end of the remaining sigmoid.

The entire peritoneal surface was closed around the "drawn through sigmoid", and the abdomen closed. The everted rectum was amputated closed to the anus, and an end to end anastomosis was made. The bowel pushed upwards and held in place by gauze.

The end result was good.

NERVOUS AND MENTAL DISEASES

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"PARANOIA OR PARANOID CONDITIONS"

This is a perversion of the mind characterized by an unusual manner of thinking, feeling or acting, which manifests itself in most cases by systematized delusions, of a persecutory nature. A few decades ago a large number of persons suffering with mental diseases were classed as paranoiacs. During recent years most of these cases have swung into the column of dementia praecox of the paranoid variety and we are at present observing a comparatively small number of typical Paranoid States. Magnan and Krafft-Ebing were inclined to group most of the affections of the paranoid type under this heading while Kraepelin prefers to place most of their number under the heading of Paranoid Dementia Praecox.

The differentiation of these two diseases is based chiefly upon the question of intellectual impairment of the dementia praecox, or the absence of this degeneration in paranoid conditions. This is very difficult to separate at times, and is about equal to saying that a man may be insane

on one subject only but normal on all others. The emotional disturbance found in a typical case of dementia praecox is absent or usually very faint in the paranoiac. It has been common to divide the condition into three stages, viz: Subjective Analysis, Persecution and Transformation of the Personality. During the first stage there may be very noticeable depression with hypochondriacal ideas. Later on the classical symptoms of "ideas of reference" are shown, and where the disease shows no improvement there follows a gradual change in the personality of the affected individual. In this stage they are apt to develop ideas of self-importance, and may insist upon an interview with some prominent person as a result of the delusion which takes possession of the patient. They are occasionally found to be quite smart on some subjects, and on account of the delusions of persecution that are so well fixed, some of them should be considered very dangerous members of society.

One lead in trying to differentiate from a praecox may be found to be the absurdity or the rationality of the foundation for their delusions. As a rule, the delusion of

a paranoiac seems rather plausible, and the delusion of a praecox usually absurd. This, taken with careful analysis as to intellectual impairment, furnishes the basis for a diagnosis.

"Ideas of reference" reflect themselves by expressions of the patient about the manner in which some particular person, society of clique tries to harass him in some way, and may cause the patient to interpret remarks made by people as always referring to him. The patients are usually very calm and apparently show a normal grasp of things in general during an interview.

It is not uncommon for them to pass muster as normal beings by casual observants.

Freud's theory of the sexual development playing a prominent part in the cause of this condition has considerable weight with some readers. It is usually considered a chronic psychosis, insidious in onset, with a gradual developing of systematized delusions. The prognosis is determined somewhat by the hereditary background, the duration prior to observance, the manner of psycho-analysis and treatment employed and proper environmental conditions.

SOCIETY REPORTS

SOCIETY REPORTS, CHARLESTON, S. C.

We are pleased to present this month a very interesting report of the last meeting of the Charleston Medical Society sent to us by the new Secretary, Dr. J. C. Sosnowski. Dr. Sosnowski was formerly editor of the Journal, and we are sure he has a fellow feeling of sympathy for us in our efforts to secure society reports from all over the State, and we are confident we will have frequent contributions from his pen.

Charleston County

The annual meeting of the Medical Society of the State of South Carolina—the Charleston County Society—was held at the Roper Hospital on Tuesday evening, December 12th., at eight-thirty. Forty-two members were present. No scientific papers or discussions were presented as at the annual meetings such are usually debarred. After the usual reports of officers and committees and other routine business, the election of such officers as were not to be continued on from the pre-

vious year was entered into. The following were elected: Secretary, J. C. Sosnowski; Treasurer, J. H. Cannon; Librarian, H. H. Plowden; Commissioner of the Roper Hospital, L. A. Wilson; Censor, T. G. Simmons; Delegates to the State Association:—T. G. Simmons, C. W. Kollock, F. L. Parker, G. M. Mood, J. S. Rhame, Alternates: W. M. Rhett, R. L. McCrady, F. B. Johnson, R. M. Pollitzer, J. F. Townsend. The officers holding over from the past year are: President, A. J. Buist; Vice-President, J. B. Johnson; Board of Commissioners of the Roper Hospital, G. M. Mood, C. W. Kollock, W. A. Smith, and J. S. Rhame. Board of Censors: E. L. Jagar, T. L. Parker.

The transfer card and application for membership of Dr. B. C. Crowell was presented. Dr. Crowell was a member of the Manilla Medical Society of the Philippine Medical Association and is now Pathologist at the Medical College of the State of South Carolina.

At the meeting Dr. H. S. Mustard announced that he would not be with us next year.

Dr. A. J. Buist and T. M. Scharlock having been members in good standing for twenty-five years were elected honorary fellows of the society.

After the business meeting a smoker was held in the Society rooms.

Dengue fever has abated, only a few cases cropping up now and then, but influenza is still on the increase.

On December 6th the First District Medical Association met at the Roper Hospital and a series of papers and clinics were presented. The program was broken into by a lunch. The attendance was good.

J. C. Sosnowski, M. D., Secretary.



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The Journal OF THE South Carolina Medical Association

VOL. XIX.

GREENVILLE, S. C., FEBRUARY, 1923

NO. 2

CONTENTS

EDITORIAL DEPARTMENT:

Provisional Program Charleston Meeting-----	391
Plans for the Charleston Meeting-----	392
Meeting of North Carolina and South Carolina Sec- tions, of The American College of Surgeons-----	392

ORIGINAL ARTICLES:

Some Observations in Prostatic Surgery by William R. Barron, M. D., Columbia, S. C.-----	395
Medical Nomenclature, Desirability of Uniformity and Suggestion of a Plan of Achievement by W. F. R. Phillips, M. D., Charleston, S. C.-----	397

(Contents continued on page ii.)

The Baker Sanatorium

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ORIGINAL ARTICLES:

Blood Chemical Analysis in Diagnosis and Treatment by Francis B. Johnson, M. D., Charleston, S. C.	402
Pyelitis of Pregnancy by N. Bruce Edgerton, B. S. M. D., Columbia, S. C.	406
A Few Sidelights on Chiropractic by Carl B. Epps, M. D., Sumter, S. C., ...	407
SURGERY DEPARTMENT	411
UROLOGY DEPARTMENT	412
PUBLIC HEALTH DEPARTMENT	414
SOCIETY REPORTS	415
DERMATOLOGY AND SYPHILOLOGY DEPARTMENT	419

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OF THE

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EDITORIAL

PROVISIONAL PROGRAM CHARLESTON MEETING, STATE MEDICAL ASSOCIATION, APRIL 17TH, 18TH, 19TH, 1923.

1. "Practical Tonsil Hemostatics" by Dr. J. W. Jervy, Greenville, S. C.

2. A Brief Series of Uterine Suspension Cases with follows up Reports by Dr. John R. Bolin, Columbia.

3. "The Various Causes of Renal Colic" by Dr. Milton Weinberg, Sumter, S. C.

4. "The Diagnosis and Treatment of Nasal Sinus Disease, with Case Report," by Dr. William B. McWhorter, Anderson, S. C.

5. "Foreign Bodies in the Upper Respiratory Tract, and Their Removal," by Dr. W. H. Nardin, Anderson, S. C.

6. "All Legitimate Progressive Scientific Medicine and Surgery, Should be Governed by one Code, and there should be but One High Standard of Proficiency in the Practice of Medicine," by Dr. D. M. Crossen, Leesville, S. C.

7. "The Use of Drugs in Heart Disease," by Dr. T. Russell Littlejohn, Sumter, S. C.

8. "Urological Diagnosis," by Dr. N. Bruce Edgerton, Columbia, S. C.

9. "Ileus, Varieties; Treatment; Case Reports," by Dr. Charles J. Lemmon, Sumter, S. C.

Essayists Representing the South Carolina Pediatric Society.

10. "Artificial Feeding of the well Child During the First Year," by Dr. Wythe M. Rhett, Charleston, S. C.

11. "Feeding During the Second Year," by Dr. S. G. Glover, Greenville, S. C.

12. "Difficult Feeding Case Principles," by Dr. W. P. Cornell, Columbia, S. C.

13. "Goiter, With Lantern-slide Demonstration," by Dr. Samuel Orr Black, Spartanburg, S. C.

14. "Some Endoscopic Problems with Slides," by Dr. E. W. Carpenter, Greenville, S. C.

15. "The Relative Difference Between Gastric and Duodenal Ulcers," by Dr. A. E. Baker, Charleston, S. C.

16. "Osteochondritis Juvenilis Deformans—Review—Report of Cases," by Dr. William A. Boyd, Columbia, S. C.

17. "Blood Transfusion," by Dr. Hugh Black, Laurens, S. C.

18. "Some of the Country Doctor's Obstetrical Problems Solved," by Dr. S. J. Rogers, Dillon, S. C.

19. "Hypernephroma," by Dr. Marion H. Wyman, Columbia, S. C.

20. "Blood Transfusion in Surgery," by Dr. Daniel L. Maguire, Charleston, S. C.

21. Paper: Title unannounced, by Dr. W. F. R. Phillips, Charleston, S. C.

22. Abscess of Lung with Report of Case," by Dr. N. B. Heyward, Columbia, S. C.

PLANS FOR THE CHARLESTON MEETING

Plans for the homecoming, seventy-fifth anniversary meeting of the South Carolina Medical Association are maturing rapidly. The following societies have been invited to meet in joint session with us: The South Carolina Nurses' Association, The South Carolina Public Health Association, The South Carolina Pediatric Society, and the South Carolina Hospital Association. It is expected that more than five hundred will attend these various conventions.

The invited guests are among the most distinguished men in the United States, and are as follows: Dr. C. C. Bass, Dean of Tulane University Medical Department, New Orleans; Dr. W. S. Leathers, President of the Southern Medical Association, and Dr. Frank Billings, Secretary of the Board of Trustees of the American Medical Association, and Dean of Rush Medical School, Chicago.

The hospitality of Charleston has always been attractive to the wives and daughters of the physicians of the State. Nearly one hundred ladies attended the last meeting at Charleston.

This year we hope to organize a woman's auxiliary to the State Medical Association, as has been done successfully in Texas and as has been authorized by the House of Delegates of the American Medical Association at the 1922 meeting at St. Louis.

A great Alumni meeting of the graduates of the Medical College of the State of South Carolina will be a marked feature of the program. It is proposed also to duplicate the clinics which proved to be so interesting at the last meeting of the Association in Charleston.

It is desired that every member of the Association invite South Carolina doctors living outside of the State to this homecoming meeting, or send their names to the Secretary of the State Association.

Notices will be published in the leading Medical Journals of the United States giving wide publicity to the occasion.

MEETING OF THE NORTH CAROLINA AND SOUTH CAROLINA SECTIONS OF THE AMERICAN COLLEGE OF SURGEONS

The annual meeting of the North and South Carolina Section of the American College of Surgeons took place in Columbia February the 1st., and 2nd., with headquarters at the Jefferson Hotel.

Of course in a short space I cannot give your readers an elaborate interpretation of all my impressions, but it is a pleasure to respond to your request by mentioning some of the most salient facts that impressed me in connection with that distinguished gathering of men from the two Carolinas.

Surgeons, or a majority of them, as a rule, have always impressed me as being broad minded and big hearted fellows, and, as on the first day of the meeting I stood to one side in the lobby of the hotel and studied for a moment the individuality of some of the men who had gathered there for this occasion. I was profoundly impressed with the fact that if you had searched North and South Carolina for her great men you could not have selected from any profession or organization of experts a body of as many men with as much qualification of true greatness in their make-up as were assembled in Columbia for this meeting.

Having joined the American College of Surgeons in 1912, when there were about a handful of surgeons in the whole State of South Carolina who belonged, and not more than two handfuls in North Carolina, I was no doubt struck with the fact of the growth of this organization in the two states. There are now thirty-five members in South Carolina and seventy members in North Carolina. Many good surgeons who are not yet members are applying for membership. They no doubt want good company. Then, too, they realize that the primary object of the American College of Surgeons is to develop, exemplify and enforce the highest tradition of the surgical calling and to make better and more competent surgeons, with more competent surroundings, without putting a damper on any one surgeon's individuality. This truth was emphasized by Dr. Allan Craig, the associate director of the American College of Surgeons, at the public meeting at the Baptist Church on the night

of February first, at which many speakers were accorded an attentive hearing by a crowded church full of South Carolinians, mostly Columbians.

At this public meeting Dr. C. W. Kollock of Charleston, presided; Governor Thomas G. McLeod gave an address of welcome; Associate Director, Dr. Allan Craig, spoke of "The American College of Surgeons and Its Relation to Public Health Problems"; Dr. Carl A. Hamann of Cleveland, Ohio, spoke on "Experimental Medicine"; Dr. John Wesley Long of Greensboro, N. C., spoke on the "Cancer Problem"; Dr. Stuart McGuire of Richmond, Va., spoke on "The History of Anaesthesia and of Anaesthetics," and Mr. Robert Jolly, Superintendent of the Baptist Hospital of Houston, Texas, spoke on "How You Can Aid Your Hospital."

Dr. Hamann was especially interesting—emphasizing the importance of the use of the lower animals in experimenting for the good of mankind, and for the progress of science—also emphasizing the fact that the scientific use of these animals was not cruelty.

Dr. Long said many interesting things about cancer—stressing the fact that cancer when it first starts is a local affair and can be cured, but if neglected becomes in a definite time a systemic affair with the cancer cells in the blood and as such is incurable.

Dr. McGuire went back into history and gave many interesting facts connected with the use of anaesthetics. One very interesting fact brought out in connection with this paper, was that Dr. Crawford W. Long got his idea of experimenting with the use of ether as an anaesthetic from pranks of South Carolina college students. It seems that a number of students of the South Carolina College were playing pranks on a janitor of the college and caused him to inhale ether until he became unconscious. This severely frightened the students, but they quit their pranks and watched the

janitor and greatly to their relief he came around all right in the course of time. It so happened that one of these students was a few years afterward a medical student and studying under Dr. Long as his preceptor. This student told Dr. Long of the incident of the college day prank, and this led Dr. Long to make some experiments with sulphuric ether. Dr. McGuire also stated that Dr. Long had used ether as an anaesthetic about four years before Morton did. He presented the fact, however, that Morton used it under circumstances in which he could give it more publicity as an anaesthetic.

The speech by Mr. Robert Jolly on "How to Help Your Hospital," was a gem, and was full of many worthy and inspiring thoughts. It should be heard not only by the people of the land but by every hospital superintendent, nurse and doctor.

The scientific programme which I pre-

sume will be published elsewhere in this issue of the Journal was full of many interesting papers and discussions.

The clinics were conducted by Columbia surgeons who were members of the College. Among those in the arena as operators were: Dr. LeGrand Guerry, Dr. George Bunch, Dr. Julius Taylor and Dr. Mike Whaley.

One more impression: viz., The sectional meeting is a good thing because it brings the men near at home in closer touch with each other and enables the surgeons in nearby states to better know who is who. It also gives them that finer touch of friendly feeling for each other. And that kindred feeling of a sympathetic nature among surgeons is one of the finest things in surgery. It is a different thing from an educated, delicate sense of touch, but it is equal in value to it.

L. O. Mauldin, M. D., F. A. C. S.

THE BLOOD PRESSURE OF HEALTHY MEN AND WOMEN

This study, reported by Brandreth Symonds, New York (Journal A. M. A. January 27, 1923), is based on the record of risks accepted at standard rates by the Mutual Life Insurance Company of New York for the years 1907 to 1919, inclusive. In connection with the use of a numerical rating, as is the practice of the New York Life Insurance Company, which charges an excess premium for a systolic pressure of 140 mm. in the ages below 40, a question arises whether any systolic pressure above 140 mm. should not be suspected of pathologic possibilities. The mortality ratios do not definitely prove this, but, for pressure above 145 mm., they indicate it strongly. Pressures below 100 mm. are rare in life insurance. They will usually be found in the very young and thin, and life insurance has shown that the applicant presenting the combination of youth, thinness and a pressure below 100 is prone to tuberculosis. To some extent this holds true also for those having a pressure below 110. Among those who are

not young, these low pressures do not seem to be associated with increased mortality. In fact the mortality ratios indicates that low pressure after the age of 45 is desirable. This is of great interest, for the average systolic pressure begins to increase decidedly at that age. It would seem that the average pressure runs counter to the best interests of health. In that respect, it resembles weight; for the average weight increases with age, while the lowest mortality after the age of 45 is found among those who are 15 per cent. lighter than the average weight. The systolic pressures of healthy women are a little lower than man's up to the age of 40, partly for the reason that women weigh less up to this age. After that, they are a little higher than man's, and they behave like man's with reference to pressures over 140 mm. The diastolic pressures of healthy men increase with weight and age in about the same proportion as the systolic pressure. It is possible that a diastolic pressure above 94 mm. is in the danger zone. The diastolic pressures of healthy women are a trifle lower than man's up to the age of 40, and a trifle higher after the age of 50.

ORIGINAL ARTICLES

SOME OBSERVATIONS IN PROSTATIC SURGERY

By William R. Barron, M. D., Columbia, S. C.

Medicine and Surgery have advanced to their present state of achievements through and by clinical and experimental observation. No Physician or Surgeon; it matters not how perfectly he may know medicine and surgery in their varied branches, can become proficient in any one or many of them without earnestly and observingly applying him or herself in practice.

The most important part of prostatic surgery is a correct diagnosis; this being the guide to the proper surgical procedure for each individual case.

A Urological Surgeon therefore must be a good diagnostician, and then be able to adapt his technique to suit the individual case.

"Procrastination is the thief of time"; No where is it more evident than in Surgery of the prostate. Men will not submit to prostatic removal until forced to, but in spite of useless and hazardous delay, we are able in the end, so to speak, 'to pluck them from the burning.'

However most of our prostatic surgery presents itself after the patients have already received irreparable damage to their kidneys, heart and other circulatory system.

I fear too many Physicians discourage their patients in having their prostate gland removed in the beginning of their obstructive symptoms because of the fear of their sexual powers being lost.

Dr. H. H. Young of Baltimore told me

that eighty per cent of his cases had normal sexual power following removal of their prostates. As far as I have been able to follow up cases I feel rather certain that we are not apt to take from, so much as we are able to add to sexual function.

The sexual function following prostatectomy is largely proportionate to the degree or state of it before prostatectomy is performed, with the greater hope of its restoration if impaired.

I know of no greater field in Surgery that gives to despondent, desperately sick individuals, the promise of life and comfort more than does prostatectomy to the man with an obstructing prostate gland.

The oldest case we have operated on was eighty three years of age and the youngest fifty-four. The average cases were between sixty-five and seventy years of age.

In the New York Medical Journal 1921, Dr. Bugbee says: 'Between thirty and forty per cent of all normal men show hypertrophy of the prostate before the age of sixty and relatively forty per cent of these present symptoms. Fully twenty-five per cent of patients presenting symptoms in his experience had carcinoma.'

Dr. Geraghty of Baltimore in a personal interview told me that quite a number of prostates removed by him for simple hypertrophy showed on pathological examination after removal, beginning malignancy.

In my own practice I have only had three cases of Carcinoma of the prostate; two of these were in extremis when seen; the other was referred to Dr. Geraghty of Baltimore for radium and removal, with an apparent cure.

The diagnosis of prostatic obstruction can often be made from the subjective

symptoms complained of plus rectal palpation of the gland and finding of residual urine.

The first symptoms are change in the size and force of the stream, increased frequency, especially at night, with dribbling at the end of urination. As the obstruction increases, actual inability to empty the bladder takes place and residual urine collects in varying quantities, leading later on to an overflow incontinence.

Residual urine means back pressure and damage to the kidneys, often with function of both kidney and bladder. Rectal examination is often misleading.

I have felt quite a few prostates that were normal by rectal palpation, on whom cystoscopic examination revealed intravesical enlargement and obstruction.

All prostatic obstructions do not require prostatectomy; the median lobe and median bar obstructions can be removed by means of the Young punch or by the electric knife or cautery.

We are all familiar with the danger of a too sudden emptying of a chronically distended bladder; this should be done cautiously and gradually by means of a Coude or bicoude catheter or supra pubic drainage under local anaesthesia.

Phthalein test should be repeatedly done after drainage is established to be sure it has risen from the dangerously low to the fixed or rising percentage of safety, which generally speaking should not be less than twenty per cent in thirty minutes after appearance given intravenously. It may take as long as five weeks to bring the more desperate cases to this point of safety from the standpoint of Kidney sufficiency.

Bladder drainage relieves congestion of the prostate, back pressure upon the kidneys, toxemia, due to interference of kidney function, and sepsis when present.

High blood pressure is not as serious a contraindication to operation as low blood pressure in prostatic surgery. Low blood pressure points to myocarditis. If patients

have clean moist tongues good appetites and good assimilation of food and water, with a stabilized phenol-sulphone-phthalein output above twenty per cent for thirty minutes, and a compensating heart, they are safe for prostatic enucleation.

Realizing that malignancy of the prostate begins always in the posterior part of the gland; in cases of early or suspected malignancy the perineal operation is the one of choice.

The method of operation should always be suited to the individual case. Frankly speaking, I believe most of us do the suprapubic operation for prostatectomy because of its greater ease of performing.

It is not the object of this paper, nor does time permit of my going into the classification of the cases best suited for the suprapubic or the perineal operation, nor into the technical details of these operations. Practically all suprapubic prostatectomies are done by the two stage method in our work.

Under novocaine or gas-oxygen-anaesthesia, with the bladder distended with a saturated boric acid solution we should carefully reflect the peritoneum well up from the anterior bladder wall before the cystotomy is done for the insertion of the drainage tube, which should be carefully fastened by a pursestring suture to prevent leakage.

After our patients have reached the standards of safety, previously mentioned, following suprapubic drainages or drainage through an inlaying urethral catheter, they are ready for prostatectomy.

At operation team work is essential and with this team work, using gas-oxygen anaesthesia, we have been able to complete most of our prostatectomies in twelve to twenty minutes by the supra pubic route. Despite the opinion of many great surgeons that time taken to perform prostatectomy is a secondary consideration, I feel that the quicker it is properly done the better it is for our patients.

We have operated on about sixty cases during the past five years without a death. During the two years prior to this we had one negro to die of gangrene of the leg, five weeks following a successful prostatectomy. This patient gave symptoms of arterial thrombosis beginning in this leg a year prior to his prostatectomy.

MEDICAL NOMENCLATURE, DESIRABILITY OF UNIFORMITY AND SUGGESTION OF A PLAN OF ACHIEVEMENT

By W. F. R. Phillips, M. D., Charleston, S. C.

The words and phrases used peculiarly or exclusively in medicine have increased from relatively small vocabulary of a century ago of a few thousand words to one that today is numbered in tens of thousands, it not in the hundreds of thousands. The explanation of this remarkable increase may be found in (a) the abandonment of Latin as the universal language of medicine, (b) the introduction of the vernacular as both the descriptive and the nomenclative of facts and ideas, old, current, and new, (c) the instability of the vernacular and its tendencies to localisms, and (d) to the great and general increase of knowledge of the facts of nature contributed by the other sciences, furnishing auxiliary means for gaining more knowledge of the facts peculiarly medical. Another factor (e) may be added, vanity, or the desire to appear more deeply learned than one's fellows, leading to the affecting of odd words or the using of new words for things and ideas already adequately described by more familiar verbal symbols.

The disuse of Latin as the general language of medicine was followed, of necessity, by the substitution of existing vernacular terms or the inventing of vernacular

expressions for those no longer retaining their Latin names; where one term had served hitherto, two became necessary, the current vernacular and the antecedent Latin, until the vernacular should become the better known of the two, and until that happened the two terms travelled side by side as synonyms. It has so come to pass that the vernacular has failed to supplant the original Latin in so many instances that the greater number of our inherited terms are represented to us by Latin and vernacular equivalents. Medical literature of today abounds in illustrations: whooping cough is pertussis, measles is rubeola or morbilli, small-pox is variola, things pertaining to the kidney are renal or nephric or nephridial, the brain is cerebrum or encephalon, and so one could go on citing instance after instance. The use of the vernacular brought also another class of synonyms, one that grew out of the necessity of translating one vernacular into terms of another vernacular. The vernacular expressions of English, French, Italian, German, and other languages, had to be translated into one another or else adopted more or less bodily from one to the other. Thus Graves' disease of the English was Basedow's for the German, Flanjani's for the Italian, as well as exophthalmic goiter for those not caring to use eponyms; Dietl's crisis has come to us defined but untranslated and has become a foreign vernacular implant, as have also Gram negative and Gram positive, and a multitude of other examples could be adduced.

The vernacular is always a language of development and change, meanings are shifting and varying from year to year, it follows, therefore, that vernacular terms in medicine tend to vary greatly from period to period. For instance, typhus fever has passed through the designations of ship fever, jail fever, famine fever, hospital fever, camp fever, and perhaps may yet number Brill's disease among its synonyms;

grip has lagrippe, influenza, and Spanish influenza as its aliases. In one of the most extensively used texts on the practice of medicine, a hasty but fairly accurate count discloses the fact that more than 600 names are used for 259 diseases.

The great and rapid increase in all spheres of knowledge that has marked the last hundred years has given us new things and ideas to describe and name, and for which no existing word symbols were available. For these new things new symbols had to be invented. This kind of increasing in our vocabulary is an increase in our real knowledge, every new word standing for a new accession to our stock of ideas.

The integrative effect of these several events, considered as causative agencies, has been to swell our technical medical vocabulary to its present volume—a volume totally beyond the capacity of any one to master and use. Some of these causes must contribute more and more words and our vocabulary must increase as our knowledge increases. Words are our means of intercommunication and the more separate and distinct words we command the more knowledge we possess. Against words of this sort, against their increase, no one can object; but against the mere multiplication of words signifying the same thing, one has reasonable cause to protest, and it is this multiplication of synonymous terms that is afflicting medicine sorely now, more sorely than heretofore because the increase in needed words is multiplying more than the ablest can retain and utilize.

Pure synonyms have no field of usefulness in science, however elegant they may be in general conversation and literature; near synonyms are dangerous where truth is the goal and not diplomatic advantage the end sought; for every near synonym has a shade of difference that may obscure the true light of the term for which it is substituted pure synonyms are not only valueless, they are even in the way, for they

take up energy that might be devoted to other words denoting distinct things and ideas. If we examine our medical literature we find we are heavily overburdened with these valueless words. May we not ask why we want them at all. Are we more learned because albuminous degeneration means the same thing as amyloid, and it the same as hyaloid, and it the same as lardaceous, and it the same as waxy degeneration; or that the brachioradialis muscle is the same as the supinator longus; or that the pineal body has sixteen other names by which it is known. What is gained by introducing from some foreign language words that mean no more than those already familiar to us in our own language. Clysis from the old greek and lavage from the French are neither one one whit better than our own wash out, not even as good; nor is anlage from the German more comprehensive or precise than beginning or rudiment, both of which have been with us for ages; hyperpiesis is no more enlightening than high blood pressure; nor hyposthenuria more intelligible than scanty urine; and anamnesis is not as easy to remember as previous history.

In each of two popular medical dictionaries, primarily intended for students use, there are approximately 70,000 words and terms defined, twenty times more words than any one of us can command, and yet these words have been taken from our more or less current medical literature. It is a perfectly reasonable assumption that two thirds of these 70,000 words could go to medical limbo and the science of medicine be better off by their banishment. However, in the full page advertisement of one of these dictionaries that was before me as I write this, there is listed 116 new words said to be taken at random and only as "samples of hundreds of important new words not defined in any other medical dictionary on the market." The incorporation of these hundreds of new words is advanced as a convincing argument for the use of

this particular dictionary. Not one of the 116 appear to me to be needed, certainly not on the postulate that a new word should represent a new thing or idea for which there exists no convenient and precise means of expressing with the ordinary words at our command. What would be the total number of medical words and terms in the literature of the world, I should not care even to guess. I am however assured by a medical man in unquestioned position to know whereof he speaks, that the number of new words appearing in the foreign language medical literature is threatening to make that literature unintelligible to us—doubtless the foreigner feels the same with respect to our literature. Science is not restricted by latitudes and longitudes, nor is it limited to one or two ethnic races, and language is the one means by which science makes itself known universally. In the best interest of science would be a universal language, but this is utopian or so remote in the future as to be but a visionary hope. However it is within expectation for us to greatly improve our own particular medical nomenclature, and taking it for granted that the advantages of a more unified and simplified terminology are half evident, it is the main purpose of this paper to point out how we may go about obtaining our desideratum, the idea is not novel nor the method original. Mathematicians ages ago realized the imperativeness of uniformity and constancy in the use of the fundamentals of their science; so too the chemists early arrived at similar practices with respect to their technical symbols, and more recently at a general agreement as to nomenclature of elements and compounds; the physicists have agreed on their units; the zoologists are working to perfect uniformity and system in their large domain; the human anatomists after seven years of laborious work reduced anatomical nomenclature from some 60,000 terms to less than 5,000, giving us what is known as the Basel Nomina

Anatomica to replace the heterogeneous conglomerations that paraded as anatomical terminology. From a purely anatomical view the Basel Nomina Anatomica has been of the greatest value, and it was hoped that the unification of anatomical names would be no inconsiderable factor in simplifying much of the terminology of the other medical subjects founded on or grown out of anatomical facts and relations. However the opposite effect has happened up to the present—more anatomical names have been added to the names in more frequent use than heretofore. As the underlying practice that has operated to bring about this condition can be noticed bringing about somewhat similar conditions in the terminologies of other subjects, it will be well to enter into a brief explanation.

The Basel Nomina Anatomica was published in 1895, and being in one sense a foreign production, having had its origin in the German Anatomical Society, it made its way slowly into the acceptance of English speaking peoples, this notwithstanding that some of the most distinguished of English speaking anatomists took an active part in its formulation, Thane, Sir William Turner, and Cunningham being active members of the committee having the work in hand. It was fully ten years later before this new nomenclature began to make progress so far as judged by its adoption by any of the current anatomical texts, and still another decenium before it became the generally adopted nomenclature of these texts. In the mean while the texts on other subjects making large use of anatomical terms were going through revisions and editions, new works coming out, and floods of journal articles pouring forth from the press, and all using the older terminologies so far as anatomy was concerned. This condition is continuing virtually to the present day; few, if any, of the medical books and articles, not specifically anatomical, take the pains to bring their anatomical terms into harmony with the anatomist's present nom-

enclature, that is, wherever this new anatomical terminology differs from the older terms in more or less current use, and there are quite a number of such differences, perhaps two thousand, some slight, some considerable, but all sufficiently different to be confusing to one not thoroughly informed. The medical student, in particular, passing from anatomy to the study of other subjects making more or less use of anatomical terms has therefore to relearn for these other subjects these two thousand names in terms of some of the many older terminologies. The medical practitioner of some years distant from his graduation is not much concerned or confused by this change in anatomical nomenclature, because he is not very diligent in keeping abreast of anatomical progress—more's the pity. All of this unnecessary addition to the medical students burden could have been obviated had the revisers and writers of these other texts have taken cognizance of this revision of anatomical names and adopted these revised names, instead of holding on to the older and more various terminologies that they themselves learned in their student days. But this kind of neglect on the part of writers has not been solely with respect to anatomical terms, many instances are noticeable of the retention of notations and names that are archaic in their original subjects. May we not say that it is an obligation that every writer owes to the public for which he writes to inform himself concerning the uses and customs of those subjects ancillary and cognate to the particular subject on which he may be writing, and particularly so if he wishes that which he writes to be received as from one who knows whereof he writes. Were this obligation to rule in medical literature we should have a not inconsiderable relief in our nomenclature. Were we to adopt another practice, that of never using synonyms for things scientific, but to have one name only for the same thing, we would cut out two thirds of the

names that now encumber our medical dictionaries. And should we supplement these two practices by a third one, that of using the most common words and illustrations known to us, we would eliminate a further considerable number of words that now serve but to overtax our memories. For example, is not cloudy swelling more descriptive of what we see than parenchymatous when speaking of certain degenerative changes in cells; is not rose rash or redness of the skin more realistic than erythema; is prophylaxis as plain as prevention; and is amnesia more expressive than loss of memory? These illustrations are not taken from rare and unusual words in our professional literature—they are some of the commonest, yet they required time and effort to learn, and continued use is needed to retain them. On the contrary, their common equivalents were learned so early that we do not know when they were learned and they are so generally used that we have no chance of forgetting their meanings. In our professional manner of expressing ourselves we have sadly departed, in a great measure, from the sage advice of the father of medicine, that the physician should use a language so plain that it would reach down to the level of the intelligence of the least informed.

Two general principles may be said to underlie the reformation of our medical nomenclature and may be formulated briefly as follows:

1. The elimination of synonyms.
2. The making of new names solely for new ideas and things.

It is not to be supposed that inflexible adherence to these two principles is practicable, any more than that a ship can sail undeviatingly on its course under every condition of sea and weather. Just as the ship when forced by stress of storm and wave deviates, or even reverses, its intended course to return to it again when conditions permit, so whenever judgment

showed departures from these principles in any particular case to be expedient or necessary they would be made.

It is self evident that no one person or no single organization could inaugurate and carry out such a reform in medical nomenclature, the nomenclature of a science so largely concerned in discovery as medicine. Even assuming a uniform nomenclature to be established today, it would not be uniform in every detail tomorrow, for tomorrow will bring something new to be described and to be named, and so will every subsequent tomorrow. But that does not mean that a consistent and constant terminology is an impossibility. To carry forward to achievement a reform as ambitious and of the magnitude as that of unifying and systematizing medical terminology, and providing mechanisms by which the unified and systematized terminology, shall preserve whilst accommodating itself to the demands the future will make on it, will require the sympathy and cooperation of every one; but what is the business of every one becomes the care of no one, therefore to a few of the whole must be delegated the work.

With no thought of presenting a perfected mechanism, but with the conviction that the mechanism can do what it is suggested to do, the following is offered: Let there be constituted a commission, to be known as the Commission on Medical Nomenclature, to be composed, to begin with, of representatives chosen according to the rules and practices of the several organizations that follow:

The American Medical Association, as representing the general medical profession.

The Association of American Medical Colleges, as representing the teaching medical profession.

The Federation of State Medical Boards of the United States, as representing the qualifying authorities.

The American Medical Editors Associa-

tion, as representing the medical periodical literature.

The Medical Book Publishers, if organized, if not some representative chosen by common agreement by them, as representing the business aspects and interests.

Representatives from the several National and Special Associations represented in the Congress of American Physicians and Surgeons.

Let this commission organize itself, let it have power to appoint committees and subcommittees as needed, and to call into association with itself any other organizations that it may deem advantageous; let it be provided with funds necessary to do its work; let it have the sympathetic cooperation of the medical profession, and adequate time in which to accomplish what it is charged to undertake. One could not but expect from such an organization, or one formed along more or less similar lines, that in the course of some years there would come results worthy of the time, labor and expense devoted to them. The influence of the opinions and recommendations of such an organization would be weighty against a systematized opposition, but there is no reason to think there would be any such. On the contrary every one of us desires the relief that can only come to us by and through some such organization. As individuals we can do nothing to help ourselves; by collective and unified purpose we can achieve our desire.

DISCUSSION

Dr. E. A. Hines, Seneca:

I do not see how any of us can conscientiously differ from Dr. Phillips in the conclusions arrived at in his paper. As a medical Editor of some ten years' standing, I am thoroughly in accord with the ideas set forth, and I have been thinking as to how to help him bring about just what he has suggested. I believe that he has given us the only solution of the problem, and I move that this Association approve of the paper which Dr. Phillips has presented to

us, and that we request him to take up the matter with the various organizations he has named, stating that the South Carolina Medical Association has requested him to do so. I feel that in doing this we shall only follow the action taken this morning with reference to the President's address—that is, give the matter publicity. Unless we give the matter wide publicity through the national organizations, the reform will never be accomplished, and I feel that it will be an honor to South Carolina to take the initiative in such a movement.

This motion was amended by Dr. Tyler to provide that Dr. Phillips report at the next meeting, and was carried as amended.

Dr. C. W. Kollock, Charleston:

This most important paper of Dr. Phillips's is upon a subject which has interested me very much. Much can be done, I think, to remedy this matter, especially for medical students, who have my pity. They are taught by many men who are too often very careless in the use of words. Some of them may use the latest terms, others the old nomenclature and so we have a multiplicity of words with one meaning. An example of this was related to me by a graduate of the Medical College of the State of South Carolina who related that one of the questions asked recently by the Board of Medical Examiners, was, "Describe the antrum of Highmore." One of the applicants had never heard of the antrum of Highmore, it having been taught as the maxillary Sinus. We should have respect for the men who studied and described those parts to which their names have been given, but I think that those who teach and those who write should use not only the simplest language but the terms that will best describe what they wish to express.

Dr. Phillips, closing the discussion:

I wish only to say this—in bringing this paper before you it was for the same reason of which Dr. Kollock spoke. It is my

fortune to teach, and I know that students are confused because of this needless synonymy in medical language. I, myself, find that in reading I have to go to the dictionary again and again. If we could only get a medical scientific nomenclature of about ten thousand words, and would use those words, think what a godsend it would be to all of us and how much time it would save,

BLOOD CHEMICAL ANALYSIS IN DIAGNOSIS AND TREATMENT

*By Francis B. Johnson, M. D., Charleston,
S. C.*

Blood chemical analysis, at this date, can no longer be considered as in the experimental stage, and of interest only to those particularly engaged in bio-chemical research. The methods first introduced required tedious technical details tending to discourage their clinical application. It is such men as Folin, Benedict, Van Slyke, and many others, who have simplified the methods and shown us the practical importance in diagnosis and treatment of certain diseases.

Clinical blood chemical analysis is a term covering a large and rapidly extending field of useful tests that have proven of definite value. To merely mention some of the most important examinations, and to endeavor to show their clinical application without burdening you with the technical details will be my object.

The analysis has proven particularly useful in the various types of nephritis and associated urological conditions, gout, diabetes mellitus, acidosis, such diseases as tetany pernicious anemia, leukemia, and diseases of the ductless glands, particularly the thyroid and pituitary.

The substances usually examined for

*From the Laboratory of Clinical Pathology, Med. Col. of the State of S. C.

Read before the South Carolina Medical Association, Rock Hill, S. C., April 20, 1922.

consist of the proteins, serum,—globulin and albumin; the non-protein nitrogen derivatives of which uric acid, urea, and creatinin are the most important; sugar, with the determination of its tolerance and renal threshold; cholesterol and other lipoidal substances, including the acetone bodies; the alkali reserve and the blood gases, of which the CO₂ combining power of the plasma is the most important, and the inorganic salts as the chlorides, the phosphates and the calcium content.

Epstein has brought forward the practical importance of the relative high globulin and low albumin content together with a rather low non-protein nitrogen and a high cholesterol, in the diagnosis of that type of acute nephritis known as nephrosis. Contrary to all other types of nephritis this type improves rapidly under a high protein diet.

All blood chemical examinations are usually made after twelve to fourteen hours fasting.

The non-protein nitrogen normally is 25 to 30 mg. per 100 c. c. of blood, of which about one half is urea (10-15 mg.), the uric acid about one tenth (2-3 mg.), and the creatinin about one twentieth (1-2 mg.) in renal disease, particularly chronic interstitial nephritis, the uric acid is the first to show a diminished excretion and consequently there begins to be a retention in the blood. This may be said to be one of the first signs of impaired renal function, the uric acid increasing from 3 upward to as high as 20 mg.

In the early stages of interstitial nephritis the urea retention may be only very slight, and it should be our endeavor in treatment to keep this down as low as possible. With

Table 1
BLOOD CHEMICAL ANALYSIS
Mgs. per 100 c. c. Blood

Case No.	Diseases	Non-prot. N	Urea N	Uric Acid	Creat- inin	Sugar	Remarks
1	Normal	30	14	2.3	1.2	110	
2	Chr. Int. Neph.	46	23	3.3	1.9	91	Improved
3	Chr. Int. Neph.	85	38	3.3	2.7	111	Improved
4	Chr. Int. Neph.	102	44	10.0	4.0	102	Died
5	Chr. Int. Neph.	117	81	3.2	6.0	84	Died
6	Chr. Int. Neph.	126	55	8.5	10.0	125	Died
7	Chr. Par. Neph.	66	37	10.0	1.2	100	Died
8	Bichloride of Mercury Poisoning	167 166 107	75 68 57	8.0 7.7 4.0	3.7 4.5 2.5	83 95 117	1-25-22 1-27-22 2-3-22
		31	17	1.6	1.4	86	2-10-22
9	Acute Neph.	37	14	1.0	1.5	100	Died
10	Mit. Insuf.	54	33	1.0	1.5	166	Died
		31	17	1.6	1.5	166	Died 10-21-21
11	Chr. Prost.	--	60	8.3	1.7	153	Pre. optreat 11-1-21
		120	66	9.7	1.8	153	No Improvement 11-23-21
12	Chr. Prost.	46	33	3.3	1.3	128	Pre-optreat 12-2-21 Imp.
		30	14	2.2	1.4	114	Operation Advised
13	Ac. Rheu. Arth.	33	15	0.8	1.2	108	Dif. from Gout
14	Ac. Lymp. Leuk.	126	66	8.3	23	80	Died
15	Diabetes	45	16	1.0	1.5	144	Improved

the progressive interference of excretion by the kidneys the urea may rise to high figures, sometimes being over 300 mg.

The creatinin being most easily eliminated, does not show any decided blood retention until the function of the kidney has been considerably impaired. Amounts of 3mg. would show that there is extreme damage, 4 mg. that it is marked, and over 5 mg. that an early fatal prognosis is impending.²

As already stated the above findings apply particularly to the chronic interstitial type. In the parenchymatous types, especially the acute form, the retention is not so marked, although we do sometimes find it quite high and the creatinin may be over 5 mg. and yet recovery take place. This is particularly well shown in bichloride of mercury poisoning, case 8, as demonstrated in Table 1, together with the blood findings in other conditions involving the kidneys and diabetes.

Five cases of chronic interstitial nephritis are shown with variations in the urea and uric acid as most often found. It will be noted that the cases with the creatinin below 3 mg. improved. We have had several cases die when the creatinin was only a little over 3 mg.; one death being shown here with 4 mg. and two others with 8 and 10 mg. respectively.

The acute or chronic parenchymatous forms, as here shown, cases 9 and 7, do not give as high retention figures as the interstitial, and yet, we see these cases died with a creatinin blood content of normal amount.

Heart conditions may show a fairly high retention due to the secondary involvement of the kidneys, yet the figures do not reach as high as those where the kidneys are primarily involved. In case 13 is shown the differentiation of rheumatic arthritis from gout in which high uric acid figures are found. Case 14 is one of acute lymphatic leukemia which shows a general blood retention including that of uric acid, which

is, however, not as high as is often seen. Case 15 is a typical one of Diabetes with the usual high blood sugar.

In gout it should be remembered that while uric acid may be increased in the blood to as much as 10 mg., the urea remains normal. Other types of arthritis do not show a uric acid retention.

In the thorough pre-operative study that is required of all surgical cases, the condition of the kidneys is of paramount importance, particularly so in urological conditions, and we wish to lay special emphasis on the use of blood chemical analysis, as well as using other functional tests, to determine this point. In Table 1 you will find two cases of chronic prostatic hypertrophy one, in spite of the proper treatment failing to improve, remained inoperable; the other case improving as shown, so that an operation was successfully performed.

The chief points to be taken into consideration are the urea retention and the CO² combining power of the blood plasma. The first showing to what extent the kidneys are taking care of its burden of elimination, the second, being the best method of foretelling the reserve supply of the diffusible alkali present in the blood, so that the extra strain put upon the whole body during severe surgical operations can be taken care of, and thus prevent those catastrophes of surgery due to a failing kidney or the development of an acidosis.

Cases with a urea retention of double the normal, or those with a CO² combining power of 40% or under by the Van Slyke method may be considered as poor operative risks, and should by lowering the protein intake or supplying alkali as indicated, be placed in such a condition where blood examination will show that they have the necessary reserve to tide them over the strain of the operation.

Relatively high retention figures may also be noted in intestinal obstruction, pneumonia, lead poisoning and malignancy, and

moderately high in syphilis and cardiac conditions.

What concerns the patient is not so much the diagnosis we make, as the bearing it has on the treatment and prognosis. When by our examinations we determine that we have a nephrosis present the indications are, as I already mentioned, for a high protein diet. While in those cases where we have a marked urea retention we realize the most important consideration is to decrease this by lowering the protein intake.

To what extent we are getting results can better be shown by blood analysis than by any other methods. When we find that the creatinin remains high, in spite of the reduced urea, the prognosis still remains unfavorable.

In many other conditions besides diabetes, we have to be on the constant outlook for acidosis. Many cases of renal disease die from an acidosis instead of an uremia. We need do no more than mention this point, and those cases associated with infantile diarrhoea, pernicious vomiting and post anaesthesia, to indicate the proper treatment.

The marked interest that is being shown in the diagnosis and treatment of diabetes mellitus is closely associated with blood chemical analysis. The normal amount of blood sugar being 80 to 120 mg. per 100 c. c. blood.

It has been well shown that many cases of early diabetes, particularly in those that are over fat, can be diagnosed even when there has never been any sugar in the urine. There may be present a fairly marked hyperglycaemia without a glycosuria, or with a slight glycosuria. This is especially found in diabetes that has existed for some time; this diminishing glycosuria being noted without a blood examination, we may get a very false idea as to the real condition the patient is in.

The renal threshold is often quite markedly raised in nephritis, so that we may

have a fairly marked hyperglycaemia. Not infrequently we find a nephritis associated with the diabetes.

Sherrill³ has shown that a moderate hyperglycemia without glycosuria may be associated with various conditions, such as neuritis, neurasthenia, feelings of weakness and weariness, and also suspects that it may predispose to retinitis, cataract, gangrene, furunculosis, carbuncles and other serious complications, and that when so found antidiabetic diet will relieve the symptoms when other treatment fails.

In the families of diabetics it is advisable to make blood sugar tests of those with no clinical evidence of the disease. Many cases of hyperglycaemia, the so-called "potential diabetics," may be found, and with the proper care in diet may be saved from developing the disease.

For the diagnosis of such cases and those of an early diabetes, we cannot depend only upon a single blood sugar estimation, it being essential that a glucose tolerance test be made.⁴ This requires that the blood and the urine be obtained after an all night fast. The patient is then given 100 gms. glucose, or, as preferred by some, 1.75 gms. per kilo of body weight, in water flavored with lemon juice. The blood is withdrawn at the end of one-half hour, one hour, two hours and three hours; water being given by mouth at these intervals and the urine obtained at the same time.

Table 2
Glucose Tolerance Tests
Mg. per 100 c. c. Blood

	Before	½hr.	1hr.	2hrs.	3hrs.
1 Normal	81	139	107	79	77
2 Hypothyroid	91	83	80	111	95
3 Hyperthyroid	83	200	182	100	117
4 Mild Diabetes	127	227	266	261	151
5 Severe Diabetes	266	380	470	444	425

As shown in Chart 1, in a normal individual we have a rapid rise in the first half

1. Epstein: Med. Cl. N. Am. 4:145.-20.

2. Myers Jr. Lab. & Cl. Med. 5:568.-20.

3. Sherrill: J. A. M. A. 77:1779.-22.

4. Strause: Arch. Int. Med. 26:760.-20.

5. Olmstead-Gay: Arch. Int. Med. 29:384.-22.

hour to as high as 140 to 150 mgs., the amount descending rapidly so that by the end of the third hour the amount is as low, or lower, than it was at the start. In hyperthyroid cases there is a rapid rise to sometimes over 200 mgs. with also a rapid fall, though this fall may not be so marked as in a normal case. In hypothyroidism we usually have a delayed absorption and a subnormal curve.

In diabetes of the milder type there may be no glycosuria on a restricted diet, but the tolerance test will produce it after a certain height of blood sugar is reached known as the renal threshold; this rise in blood sugar which is usually quite marked, continues high beyond the third hour. In well marked diabetes, it is not usually considered necessary to make a tolerance test, but at times it may be required, in which case, a much smaller quantity of glucose is used depending on the extent of the glycosuria already present.

CONCLUSIONS:

In conclusion we will emphasize that blood chemical analyses are of extreme importance in the thorough understanding, diagnosing and treatment of certain diseases, and the field for its use is being continually widened.

Simplified methods have been introduced so that any fairly well equipped hospital or other laboratory can carry them out.

Certain cases are presented showing the value of some of the examinations including the glucose tolerance test.

PYELITIS OF PREGNACY

*By N. Bruce Edgerton, B. S., M. D.,
Columbia, S. C.*

The primary mechanical cause of pyelitis is the pregnancy. The bacterial agent in 131 out of 159 cases is the colon bacillus according to the investigations of Albeck. The right kidney is the kidney involved in

65 of 70 cases. The Colon bacilli increased in number due to constipation overloads a kidney thoroughly congested mechanically by the pregnant uterus—and an infection takes place.

This infection varies in intensity from a simple affair to a most fulminating type—The diagnosis resting usually on the presence of pus in the urine and pain or tenderness at the costo-vertebral angle, associated with fever and more or less prostration. Painful and frequent urination is a usual symptom and may be the first thing complained of by the patient. Painful and frequent urination does not mean a cystitis. Tension of the renal capsule will not cause bladder symptoms—but an irritation in the pelvis of the kidney associated with more or less ureteral involvement will give painful and frequent urination. Painful and frequent urination usually means some infection congestion or irritation at either the ureteral orifice or the urethral orifice—and not necessarily a cystitis. The bladder in the larger percentage of cases will be perfectly normal.

In all cases of pyelitis there is a nephritis associated. Bacterial infections of the kidney produces only an occasional cast whereas usually in contradistinction toxic irritation of the kidney produces large numbers of casts. Witness—A right renal tuberculosis produces pus, tubercle bacilli, albumen and epithelia but no casts—the left kidney not the seat of tuberculosis but of a toxic nephritis excretes albumen and casts, but no pus or tubercle bacilli. In every case of pyelitis there are pus cells and albumen but not of necessity casts. Pus and casts however always signify a kidney badly destroyed.

A kidney, the seat of a mild pyelonephritis is always very badly damaged by pregnancy. The woman should be warned of the danger of becoming pregnant and the kidney should be energetically treated. The usual treatment consists in Urotropin and Acid Sodium Phosphate on the one

hand and Sodium Citrate on the other. Most Bacteria grow best in an alkaline medium therefore the Sodium Citrate should not be given over a long period of time. The best results seem to be secured by alternating these remedies. Vaccine treatment has proven of some use in stubborn and chronic cases but its efficacy seems to be temporary.

Of recent years silver nitrate of varying strength has been used direct into the renal pelvis thru the ureteral catheter. This has cleared up some of the most stubborn chronic cases and seems to be the best agent at hand.

In early pregnancy (pyelitis usually occurs about the fourth month) unless the attack subsides and the pus disappears from the urine after proper treatment the pregnancy should be terminated. For a pregnancy does irreparable harm to an infected kidney. In the late months of pregnancy the cases can most always be tided over till after the delivery.

The usual medicinal treatment supplemented with the inlaying ureteral catheter works like magic in some of these cases. The catheter may be left in for several days. After removing it and resting the ureter for several hours it may very safely be replaced without the slightest harm.

Another mechanical proposition which may appeal to you is to have your patient rest on the left side on the theory that this will relieve a part of the pressure of the pregnant uterus on the right ureter. I am of the opinion that this is the case.

A FEW SIDELIGHTS ON CHIROPRACTIC

By Carl B. Epps, M. D., Sumter, S. C.

Once upon a time, or, to be more exact, according to chiropractic history, in the year 1878, a man stooped over, and, to quote

his own words, "I felt something pop and heard it crack in my back," Friend, that could not have been a loud noise, but it was of great moment, sounding, as it did, the death knell of all the highly scientific, but fallacious, theories of modern medicine. In comparison with this anatomical displacement in the vertebral line, that later break in the Hindenburg line is unworthy of notice. But, let us continue. In two minutes' time the unfortunate man was deaf! Now, that may seem strange to anyone who has always believed that the auditory nerve has its origin within the cranium instead of in the vertebral column. Just another evidence of our pitiful ignorance.

A cruel fate allowed this good man, Harvey Lillard, by name, to remain deaf for seventeen years. Why was this, except to later shame the ear specialists who failed to give him relief? However that may be, seventeen years after his accident, Harvey Lillard, who was then a janitor in a building in the Ryan Block, at Davenport, Iowa, found someone who gave him the long delayed help. Of course the man who gave this relief was none other than Daniel David Palmer, the discoverer of chiropractic. Palmer was not a chiropractor at that time, though. He was what was then known as a "magnetic healer," or, what we, of the unenlightened, class among the fakes. Even his father before him, Daniel, tells us "was disposed to reason on subjects pertaining to life." This Daniel Palmer questioned Lillard as to his deafness, and on learning how it had happened, proceeded to examine the man's back. He was rewarded by finding in the upper region of the spinal column a well marked deformity caused by the projecting spinous process of the vertebra. At once the master mind of this long-whiskered magnetic healer began to analyze the situation. To quote the words of his son, "Father reasoned out the fundamental thought of this thing, which was that if something went wrong in that

back, and caused deafness, the reduction of that subluxation should cure it. That bump was adjusted, was reduced, and within ten minutes Harvey had his hearing, and has had it ever since." This was the beginning of the new science which claims to have completely upset the teachings of all medical men, from and before the ancient Aesculapius to the modern Osler.

Following this brilliant beginning, Daniel David Palmer apparently deserted his former occupation, and began to develop his new science. Far be it from us to even suggest that possibly the public had lost faith in his magnetic healing and he found it necessary to invent something different. The new science (?) was named "Chiropractic," from the Greek words "cheiro," meaning "hand," and "practic," meaning "done," therefore, "hand done." There has been some argument about the correctness of this Greek, but that is of small concern to us.

We are told that "Chiropractic is the philosophy, science, and art of things natural, and a system of adjusting the subluxated vertebrae of the spinal column by hand, for the restoration of health." If that be not sufficiently clear, we have, in further elucidation, the following definition, taken from an act passed by the New Jersey Legislature: "The term chiropractic when used in this act shall be construed to mean and be the name given to the study and application of a universal philosophy of biology, theology, theosophy, health, disease, death, the science of the cause of disease, and art of permitting the restoration of the triune relationships between all attributes necessary to normal composite forms, to harmonious quantities and qualities by placing in juxtaposition the abnormal concrete positions of definite mechanical portions with each other by hand, thus correcting all subluxations of the articulations of the spinal column, for the purpose of permitting the recreation of all

normal cyclic currents through nerves that were formerly not permitted, through impingement, but have now assumed their normal size and capacity for conduction as they emanate through intervertebral foramina, the expressions of which were formerly excessive, or partially lacking,—named disease." Ah, how beautifully simple!

So far as we have learned, it is no where claimed that the late D. D. Palmer ever received much education, it being stated that "he was educated for and followed the vocation of magnetic healing," This, however, did not deter him from founding at Davenport, Iowa, "The Palmer School of Chiropractic," which claims to be the "Chiropractic Fountain Head," the highest authority upon all things chiropractic. Daniel David Palmer was in time succeeded by his son, B. J. Palmer, who is now owner, and president of the above named school. The long, flowing, prophet-like locks of this younger Palmer, reaching nearly to his shoulders, are accompanied by a mustache, and neatly clipped beard, the latter fitting in with the popular conception of a physician. His education, it appears, consists of attendance, for a while, upon public school, then graduation from the Palmer School of Chiropractic, and, later, a three months' course in so-called "art and music" in Chicago.

Before attempting to delve further into the depths of this profound science, let us first learn what is meant by a "subluxation," the pathological condition upon which its teachings are founded. A subluxation, according to Palmer, is "a condition of vertebrae wherein the articulations are just slightly separated." It differs from a luxation, which is the same as a dislocation, or a condition in which there is a complete separation of the surfaces of the vertebrae. A subluxation, it is claimed, may be caused either by violence, such as a blow, or by a jar, slip, or by such emotions as anger and grief. Even drafts of air, the chiropractor claims, may bring it on. The sublux-

ation causes a pressure upon the nerves where they escape between the vertebrae, and this is the cause of what is commonly called "disease."

The chiropractor compares the brain to a dynamo, which creates the so-called "life force," or vital energy, as a dynamo creates, or generates electricity. From the brain one set of nerves lead out to the different organs, as the stomach, liver, etc., just as the positive wire leads out from the dynamo. The positive current is used in the organ, and, as a negative current, it passes back to the brain through the second set of nerves acting as negative wires. In the brain this negative current is revitalized, and is ready to start out again as positive current. Thus the circuit is complete.

Now, a subluxation, by causing pressure upon these nerves, diminishes their calibre, thus decreasing their carrying power, and we have so-called "disease." On the other hand, the displaced bones may leave the nerve openings too large and we have an excess of current going out, and this, also, may cause disease. In other words, "disease is simply a register as to the amount or excess of current that an organ receives at the end of the nerve." According to this theory diarrhoea, diabetes, and wild, raving insanity, all show too much current, while constipation, Bright's Disease, and the stupid, melancholic type of insanity, all show too little current. It depends entirely upon the amount of pressure on the nerves at the vertebral column as to whether we shall have what ignorant doctors classify as typhoid fever, or tuberculosis, or whooping-cough, or hemorrhoids.

But, what about the false germ theory with which the doctors have been humbugging a long-suffering public? The chiropractor settles that question in a few words. He, so to speak, knocks "L" out of Lister and his measly microbes. Listen, Lister! What are germs? Germs, my dear friend, of all kinds are simply scaven-

gers, just as stray dogs, hyenas, and our well known buzzards are scavengers. They exist, but they cannot cause disease, the disease is already there when they arrive. If A. and B. were shut up in a room together, and A had small-pox, B could not possibly catch it if he did not have a subluxation of just the right kind. If B did have a subluxation, of exactly the right degree and position, he would have small-pox anyway, whether he came in contact with A, or not. The small-pox germ is simply the particular scavenger for that degree of pressure. Germs can do no harm, as they cannot live on anything but dead tissue, the chiropractor says. This applies to venereal diseases, also, Palmer having testified that he would not be afraid to put gonorrhoeal germs in his eyes. There is no statement, however, that he really tried it.

It appears that there is one thing that has given the chiropractors no little trouble. That is, the subject of the cranial nerves. As these nerves do not come out through vertebral foraminae, how could the chiropractor claim to treat diseases of the eye, ear, etc.? Simon R. Jansheski, of Wisconsin, a graduate of the Palmer School, during court testimony about twelve years ago, admitted that he could not treat cranial nerves chiropractically. He said, "If it is in the cranial nerves, it is beyond me." Now, that admission could not be allowed to stand, for it would cause the chiropractor no end of embarrassment, as well as cut down his revenue. But, what was to be done about it? Leave that small item to B. J. Palmer, supreme head of the "Chiropractic Fountain Head." He proceeded to discover a brand new system of nerves that all other anatomists had inadvertently overlooked. By examining patients with eye diseases, and diseases of other organs supplied by the cranial nerves, he claims to have found numerous "sore spots" leading in lines from the affected organs by more or less circuitous routes, but always

very obligingly ending in a subluxated vertebra. So far, the modest Palmer has blushingly refrained from putting in a claim for the Nobel prize, which his epoch-making discovery entitles him to. Through some oversight, he has also failed to prove the actual existence of these nerves by making a dissection before competent anatomists. However, by chiropractic manipulations he claims to release pressure upon these mysterious nerves, thereby restoring sight to the blind, and perhaps that is of more importance than wasting his precious time showing these nerves to a skeptical bunch of pill-dispensers and saw-bones.

There are various other phases of chiropractic that I would like to consider, many ridiculous contradictions that could be brought out, but time forbids. Nevertheless, before closing, we must consider the financial side of the great science, for here chiropractic "do shine"! The Palmer School of Chiropractic claims, and probably truthfully, to be the only "professional institution" which "offers to its students a course in salesmanship which will teach them to dispose of their services, which is all they have to sell when they graduate." This is an exact quotation from their latest catalogue. Under this salesmanship course we see outlined certain topics, such as, "Personal Magnetism," "The Magic Story," "Business Relations," "Finding the Patient," "Mechanical * Advertising," "Newspaper Advertising, and Advertising Through Other Mediums," also "Selling The Patient," and "Keeping Yourself Sold." To quote further, this course "teaches the future chiropractor the detail of conducting an office, the best methods of approaching the public, the

important phases of advertising, and, above all, it gives to him the results of personal experiences of thousands of chiropractors, some of whom have been successful in selling their product and some of whom have been less fortunate."

The Palmer School offers one course of 12 months, with a certificate designating the holder as simply "Chiropractor". The 18 months course leads to the "D. C." (Doctor of Chiropractor) degree. In order to secure the "Ph. C." degree (Philosopher of Chiropractic), the student must write an original thesis on "Chiropractic Philosophy."

The tuition fee for one person is (since Sept., 1922) \$450.00, with \$50.00 discount for cash down. If your wife is ambitious, and wants to become a "D. C.", why, just add \$100.00, and bring her along, knocking off \$75.00, if you fetch the cash with the wife. The school claims an enrollment of nearly 3000, as against less than 500 twelve years ago. At even \$350.00 each, that would give tuition fees of \$1,050,000.00 annually. Add to this the profits from selling the text books, etc., from their printing plant, and you will not wonder that Palmer says his school does not want any endowments with strings tied to them.

There are literally thousands of chiropractors in the United States and Canada now. Not very many have yet reached South Carolina, but just wait!

As physicians, what is our duty? As trusted guardians of the public health, should we sit idly by while those ignorant quacks ply their dangerous trade? Or should we turn on the light of truth and expose their false claims? I, for one, believe it to be our clear duty to show them up.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

UNDESCENDED TESTICLE

Stout, in the Southern Medical Journal, March 1922, writes of the undescended testicle.

He states that the testicle has both an external and an internal secretion, the former expressed by the spermatozoa, and the latter by a substance affecting the characteristics of manhood.

When misplaced there is a modified perversion of function. In fetal life the testicle lies just beneath the kidney, by the sixth month it is just inside the internal ring, and just before the ninth month it passes into the scrotum.

The testicle may be arrested at any point in its descent. The most frequent location is within the inguinal canal. Some of the rarer locations are, anterior to the external oblique aponeurosis, in the soft parts between the root of the penis and the pubis, and very rarely in Scarpa's Triangle.

Most undescended testicles atrophy, but not all, as some adults with undescended testicles have them fully developed as regards size and relatively few of them are entirely impotent.

It is very questionable as to whether undescended testicles are more prone to malignancy than are normally situated tests.

All cases of undescended testicles except those remaining in the abdomen are accompanied by actual or potential hernia.

Surgically, there are three procedures for the relief of this abnormality, i. e. or-

chidectomy, orchido-celioplasty, and orchidopexy.

The operation of choice is orchidopexy, e. g. the replacement of the testicle into the scrotum proper. Often this is impossible due to shortness of the component parts of the cord itself, in which case some surgeons advise orchidectomy.

Orchidectomy, however, at once does away with not only the external, but the internal secretion as well, and in many instances in addition induces a profound psychic disturbance over the loss of that organ.

Many men prefer almost anything to the loss of one of their testicles, yet, without a moment's hesitancy consents for one or both of their wife's ovaries to be removed. Inguinal canal as the liability of trauma is greatly lessened.

If women's ovaries hung as do men's testicle, there would be far fewer oophorectomies.

In undescended testicles where it is impossible to restore them to the scrotum, it is better surgery to replace them in the abdomen. Here, notwithstanding, that its new habitat early induces loss of spermatogenesis, yet the sexual cells continue to thrive, impotency does not necessarily result and the internal secretion continues. This corrects the physical deformity and prevents undesirable psychic disturbances.

In our opinion, this (orchidocelioplasty) is the next best step to orchidopexy. Intra abdominal testes are less prone to malignancy than are testes remaining in the in-

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

Barney J. Dellinger: The Question of Recurrent Renal Calculi, Surgery, Gynecology and Obstetrics. Vol. 35 No. 6 December 1922.

Barney comments upon the scarcity of literature on this subject and lack of satisfactory statistics in regard to it.

Quoting almost verbatim from Barney's paper: We are all familiar with the fact that during its residence in the kidney, a stone may give rise either to no subjective symptoms whatever, or to pain and in such an usual location that the diagnosis is not made without some delay. Furthermore, it is equally well known that in an appreciable number of patients the urine is persistently negative. For these reasons it is obvious that in order to say whether a patient has a renal calculus, he must be personally examined and have a careful roentgenographic examination of the urinary tract. With this idea in mind, Cabot and Crabtree based their conclusions which follow only upon such cases as they were able to examine personally. There were 87 such cases, of which 63 had been operated upon for stone in the kidney, 21 for stone in the ureter. 30 cases treated by nephrotomy showed a so-called "recurrence" of 56 per cent, while in 33 cases having a pyelotomy the figure was 51 per cent. Unfortunately we do not know how many of these patients had had an X-ray during convalescence from or within a few weeks after operation. In the absence of this information it is impossible to say whether the stones found in a kidney a year or more after operation are actual recurrences or

what may be called "left overs" from the operative procedure. Barney's observations of the past year convince him that many of the cases would fall into the latter class.

More recent investigations of his show results which are equally unsatisfactory. He says that of 70 cases of nephrotomy, which includes all operations of this type performed at the Massachusetts General Hospital from 1897 to date, the results are known in 35, either through personal communication through the local physician, or by actual examination of the patient. Out of 16 who had a roentgenographic examination, 14 showed the presence of stone in one or both sides, giving a percentage of 40 of those whose definite results were known. But here again the figures would be undoubtedly greater if all cases had been checked up by this procedure, and also many were unquestionably instances of stones left over after operation.

He says that Braasch, of the Mayo Clinic, gives a more promising view of the possibilities offered by surgery for the relief of renal calculus. Of 88 patients re-examined, including roentgenography, only 13, or 14.7 per cent, showed recurrence.

He mentions the procedure used at the Mayo Clinic. He thinks that under certain circumstances that it may be of indispensable value in search for stones in difficult cases. The procedure referred to is the fluoroscope, either by the surgeon himself or by the roentgenologist during operation. Barney states that his experience with the fluoroscope has not been extensive but of tremendous value in certain cases. He thinks that even the fluoroscope

with a competent observer behind it is not infallible.

His conclusions are that stones may be left in a kidney from which they were all supposedly removed with disappointing frequency, in spite of every means which one may adopt. A roentgenogram during convalescence is absolutely essential if one is to know the exact state of affairs before dismissing his patient as cured.

His summary is as follows:

1. There is an unfortunate paucity of investigation on the matter of recurrent or overlooked renal calculi and it would be desirable to have various observers in different clinics undertake such an investigation.

2. Roentgenographic examination during or very shortly after convalescence is essential for the accuracy of the results in such a piece of work.

3. While the few data which are at hand show that stones are subsequently found in the kidney after operation in a surprising number of instances, it is impossible to say

which of these stones are "recurrences" and which are "left overs." Actual recurrence is unquestionably very frequent.

4. The complex character of the interior of the kidney, hemorrhage from its mucosa, and the comparative inaccessibility of this organ in many cases contribute to the difficulties of removing all stones.

5. Although various procedures may be resorted to for this purpose, none is infallible. It would appear that the fluoroscope offers the most promising prospects for success.

6. Pre-operative study cannot be too painstaking, nor must the possibility of superimposed shadows of calculi be overlooked.

7. A second operation for the removal of remaining stones is advisable in most cases and should be done soon after first operation.

8. Pyelotomy is unquestionably the operation of choice and is often advantageously combined with partial nephrotomy.

PUBLIC HEALTH

LEON BANOV, M. D.,
Health Officer, Charleston County,
Charleston, S. C.

A YEAR OF PROGRESS IN PUBLIC HEALTH

"The most encouraging feature of the year 1922, in the application of fundamental scientific advance to the promotion of the public health," points out The Nation's Health in a recent editorial, "has been the development of Schick testing and Toxin-antitoxin immunization against diphtheria." The acceptance by the public of this practical method of producing an active immunity against this disease and Dr. Park's success in producing a toxin-antitoxin mixture of full protective protency, and yet free from any tendency to produce unfavorable reactions, promises a day not too far distant, when diphtheria will be relegated to the growing list of "has beens" that claimed its toll of human life in former times.

Among the other points of progress in the theory and practice of the public health, that we may regard with satisfaction, and from which we may take courage to advance still further, according to the same editorial, may be mentioned the following developments and contributions to science:

In the field of venereal disease control, the Kahn precipitation test for the diagnosis of syphilis promises to be a distinct advance in laboratory technic, while the use of sulpharsphenamin, according to the reports of the U. S. Hygienic Laboratories, is likely to prove valuable in the treatment clinic.

Much impetus has been gained in the field of maternity and infant hygiene through the workings of the Sheppard-

Towner Act, and numerous public agencies, assisted by federal aid, have started on a campaign which will undoubtedly have a wholesome effect in reducing our infant mortality rate.

The studies of Hess and of Park on the etiology of rickets, and the encouraging results obtained in the treatment of this disease by two such apparently diverse agents as cod liver oil and sunlight deserve to be mentioned here.

The investigations of Krause in the etiology of tuberculosis continue to shed light where light is most needed, and his latest contribution to the American Review of Tuberculosis (vol vi, March 1922) suggests a possible explanation of the differing age incidence of this disease.

Rural sanitation is going forward in the Southern States under the encouraging influence of the International Health Board of the Rockefeller Foundation, and it is no mere coincidence of the times that a Bill is now pending in the U. S. Senate to drain certain swamp lands in a comprehensive plan of land reclamation in the United States.

The fact that more and more attention is being directed to the improving of our methods of training public health workers and teaching public health indicates the growing importance of this branch of medicine, and it does not require a visionary or a seer to predict a time, not too distant, when public health will be recognized in the United States by the creation of a department of public health and welfare with a member of the Federal Cabinet as its head.

SOCIETY REPORTS

PROGRAM

SECOND DISTRICT MEDICAL ASSOCIATION OF SOUTH CAROLINA

Held at Batesburg, S. C., Wednesday,
January 10, 1923.

Session—Picture Theatre, 10:00 a. m.

Dinner—Commercial Hotel.

Common Eye Conditions Met in General
Life: by Dr. Wm. Weston. Discussion
by Dr. C. L. Kibler.

Congenital Club-Foot: by Dr. W. A.
Boyd. Discussion by Dr. George Benet.

Hygiene Applied: by Dr. I. Schayer. Dis-
cussion by Dr. J. R. Allison.

The Disease of the First Few Days of
Life: by Dr. Wm. Weston. Discus-
sion by Dr. Ed W. Barron.

Simple Laboratory Examinations as an Aid
in Diagnosis: by Dr. F. M. Routh. Dis-
cussion by Drs. H. M. Smith and Julius
H. Taylor.

Abcess of the Lung with Report of Case:
Dr. N. B. Heyward. Discussion by
Dr. Heyward Gibbs.

A Discussion of the Diagnosis of Gastric
and Duodenal Ulcers: by Dr. LeGrand
Guerry. Discussion by Dr. George
Bunch.

Dr. Marion H. Wyman,
Secretary.

MARLBORO

Whereas it has pleased God in his al-
wise providence to claim by death our
Brother and Colleague, Dr. A. M. Buch-
anan, and whereas in his death his family
has sustained irreparable loss, and the
Marlboro County Medical Society, one of
its true and loyal members, and whereas,
we deeply sympathize with his family and
loved ones in the loss they have sustained,
now therefore be it resolved:

First: We extend to his family and

loved ones, our heart felt sympathy in their
bereavement.

Second: That a copy of these resolu-
tions be included in our minutes, and a
copy be sent to the Journal of the South
Carolina Medical Association. ..

Third: That these resolutions be copied
in the Pee Dee Advocate, and a copy mailed
to his family.

Respectfully Submitted,

J. F. Kinney,

Committee. Douglas Jennings, Jr., P. M.
Kinney.

COLUMBIA

The Columbia Medical Society, number-
ing eighty-six regular members and seven
honorary members, met January the 8th,
with twenty-eight members present; Dr.
N. B. Heyward, the President, presiding.

Dr. R. E. Seibles read a paper on
"Tubal Patency in Relation to Pregnancy;"

Dr. Robert Gibbs made an address based
upon his recent visit to the Leper Hospital
at Hawaiian Islands.

Dr. Allison presented a patient with
"Mollusum Contagiosum," and demon-
strated microscopical slide of case.

Dr. Geiger presented a patient with
marked nodular facial eruption which Dr.
Allison diagnosed as "Acne Vulgaris."

Dr. Julius Taylor reported a case of
Pregnancy occurring in a patient who has a
very large ovarian cyst. The cyst was re-
moved successfully but the patient de-
veloped an extensive ether pneumonia, but
recovered without aborting.

Dr. Allison, for the library committee,
reported 35 of the leading American and
Foreign Journals regularly subscribed for
and coming, also 30 State Journals com-
ing through courtesy.

Officers for 1923. Dr. N. B. Heyward

President, Dr. F. M. Routh, Vice-President, Dr. W. P. Cornell, Secretary and Treasurer.

Delegates to the annual Convention. Dr. N. B. Edgerton, Dr. C. L. Kibler, Dr. G. H. Bunch, Dr. A. E. Shaw.

FLORENCE

The Florence County Medical Society met January the 29th, 1923, ten members answering to roll call.

The president, Dr. E. M. Hicks, was in the chair;

The pending Chiropractor bill in the House of Representatives came up for discussion, and the society authorized the Secretary to write the Florence county delegation, requesting them to do all in their power to defeat the passage of the bill, the letter to be signed by every member of the society.

The society unanimously endorsed the Merchant's Credit Association of Florence, S. C., and recommended it to the individual members as an effective means in collecting old accounts, and as a protection against "dead beats."

Election of officers resulted as follows: Dr. L. B. Salters, President, Dr. E. M. Allen, Vice-President, Dr. M. R. Mobley, Secretary.

Delegates to the State Meeting in Charleston, Dr. L. B. Salters, and Dr. M. R. Mobley.

ORANGEBURG

The Orangeburg Medical Society held an interesting meeting January the 11th, Dr. C. I. Green, the president, in the chair.

Nine members answered to roll call.

Dr. C. A. Mobley's instructive paper on "Placenta Previa" was discussed freely by all present.

Officers for 1923 were elected and are as follows:

President, Dr. C. I. Green, Orangeburg, Vice-President, Dr. A. L. Black, Bowman,

S. C., Secretary and Treasurer, Dr. G. M. Truluck, Orangeburg.

The delegates elected to the annual meeting in Charleston next April are, Dr. C. I. Green, and Dr. M. L. Nelson.

A resolution was passed to invite the South Carolina Medical Association to meet in Orangeburg in 1924.

Dues were paid by sixteen members.

After the meeting dinner was served at the Orangeburg Hotel.

LAURENS

The Laurens County Medical Society held a called meeting December the 29th, 1922; the president Dr. W. T. Pace presiding.

Seven out of the twenty-one members answered to roll call.

The Representatives of Laurens county were invited for the purpose of discussing with them the Chiropractor bill which is expected to come up at the next session of the Legislature. They responded with interest, and out position as regards this bill was thoroughly explained to them.

Officers of the coming year were elected as follows:

President, Dr. H. S. Black, Vice-President, Dr. R. R. Walker, Secretary and Treasurer, Dr. J. W. Davis.

Delegates to the State Convention, Dr. W. T. Pace, and Dr. C. P. Vincent.

LEXINGTON

The Lexington County Medical Society met in the Batesburg-Leesville High School Building on Wednesday January 10th with Dr. Carl L. Able in the chair. Nearly every member of the society answered to roll call.

Resolutions upon the death of Dr. J. J. Wingard introduced by Dr. W. P. Timmerman were passed with the promise that they be copied in our minute book for preservation and that the secretary furn-

ish a copy to Mrs. Wingard. Which was as follows:

"Whereas Dr. J. J. Wingard, our friend and collaborer full of good thoughts and works fell peacefully asleep the fourth of December 1922 and was gathered to his father. We, the members of the Lexington County Medical Society desire to place on record the deep sense of our loss and the high appreciation of his worth as a citizen and member of our society. In each of these relations he was found loyal, faithful and true being kind, generous and sympathetic.

In his death we recognize the hand of an allwise and merciful Providence. This society will miss his wise counsel but will cherish his memory and strive to emulate his virtues remembering that the time will soon come when we too must rest from our labors."

Dr. Wingard was one of the charter members of our society which was organized in 1903. He served as its secretary continuously for seventeen years and one year as president. The success of our society was largely due to his interest and activity.

The resolutions passed at the last meeting concerning the invitation to the doctors of Saluda and Edgefield counties to join our society was discussed and Drs. Marsh of Edgefield and Asbill of Saluda who attended this meeting said that they would join our society if their county societies did not hold meetings.

Dr. W. P. Timmerman was elected delegate and Dr. G. F. Roberts alternate to the State Medical Association.

The next meeting will be held in Lexington on the first Monday in April.

J. H. Mathias, Sec.

THE MEETING OF THE NORTH CAROLINA AND SOUTH CAROLINA SECTIONS OF THE AMERICAN COLLEGE OF SURGEONS

Thursday, February 1, 1923

9 a. m. to 12 noon

Clinics and Clinical Demonstrations at the following Hospitals:

Columbia Hospital

Baptist Hospital

2:00 p. m.

Hospital Conference, Jefferson Hotel Ball Room

Charles Wilson Kollock, M. D., Chairman

The Hospital Program of the American College of Surgeons

Allan Craig, M. D., Associate Director, American College of Surgeons.

Hospitalization from the Surgeon's Standpoint

Carl A. Hamann, M. D., Cleveland, Ohio, Professor of Clinical Surgery Western Reserve University School of Medicine.

John Wesley Long, M. D., Greensboro, N. C., Emeritus Professor of Gynecology and Pediatrics, Medical College of Virginia.

Hospital Standardization from the Hospital Superintendent's Standpoint

Mr. J. W. Clark, Superintendent Columbia Hospital, Columbia, S. C.

The Soul of Hospital Standardization

Rev. C. B. Moulinier, S. J., President Catholic Hospital Association.

Hospital Standardization from the Surgeon's Standpoint

Robert Jolly, Superintendent Baptist Hospital, Houston, Texas.

Principles of Hospital Standardization

Malcolm T. MacEachern, M. D., President-elect American Hospital Association, Associate Director for Canadian Activities, American College of Surgeons.

Round Table Discussion, led by

Malcolm T. MacEachern, M. D., Stuart McGuire, M. D., Richmond, Va., Robert S. Cathcart, M. D., Charleston, S. C., Edmond S. Boice, M. D., Rocky Mount, N. C., LeGrand Guerry, M. D., Columbia, S. C.

RECESS

Annual Meeting North and South Carolina Sections, The American College of Surgeons

8:00 p. m.

Community Health Mass Meeting

C. W. Kollock, M. D., Charleston, S. C., Chairman.

The American College of Surgeons and its Relation to Public Health Problems

Allan Craig, M. D., Associate Director The American College of Surgeons.

PROGRAM

The Hospital Standardization Program of the American College of Surgeons

Malcolm T. MacEachern, A. M., M. D., President elect, The American Hospital Association.

Some Facts About Cancer

Carl A. Hamann, M. D., Cleveland, Ohio, Professor Applied Anatomy and Clinical Surgery, Western Reserve University School of Medicine.

Experimental Medicine from a Surgical Standpoint

John Wesley Long, M. D., Greensboro, N. C., Emeritus Professor of Gynecology and Pediatrics, Medical College of Georgia.

NATIONAL SERVICE IN A \$25,000.00 SUIT

*That Included Three
States and Covered Over
4,000 Miles.*

A woman living in a small town in the Middle West, went to another state for an operation. The operation was performed. She returned home sooner than was recommended.

A doctor in her home town cared for her during convalescence.

She did not improve and sought the services of another physician in another part of the same state.

He suggested a trip to California. She took the trip and after arriving on the coast, sought and received services from Doctor Number Four.

Upon returning home she died, several months later

Her husband sued Doctor Number One.

Our Legal Specialists in malpractice immediately became active in behalf of the defendant and in the course of compiling the defense.

DISCOVERED THAT ALL FOUR
PRACTITIONERS WERE CONTRACT
HOLDERS OF THE MEDICAL
PROTECTIVE COMPANY.

Was that of any assistance to our Legal Department? The answer is too plain to need emphasizing.

Specialization is the only efficient protection. Our contract holders receive the benefit of the experience and knowledge accumulated in the conduct of nearly 16,000 suits and claims in every corner of the country.

For Medical Protective Service

Have a Medical Protective Contract

The Medical Protective Co.

of

Fort Wayne, Indiana

Professional Protection Exclusively

History of Anaesthesia and Anaesthetics

Stuart McGuire, M. D., Richmond, Va., President and Professor of Surgery, Medical College of Virginia.

Better Hospitals

Rev. C. B. Moulinier, S. J., President of the Catholic Hospital Association.

How You Can Aid Your Hospital

Mr. Robert Jolly, Superintendent Baptist Hospital, Houston, Texas.

Friday, February 2, 1923

9:00 a. m. (recess for lunch)

Scientific meeting—Jefferson Hotel

Jacob S. Highsmith, M. D., Chairman.

The Treatment of Certain Types of Goiter

Stuart McGuire, M. D., Richmond, Va.

Intestinal Obstruction

Carl Hamann, M. D., Cleveland, Ohio.

The Value of Enterostomy in Intestinal Obstructions

John Wesley Long, M. D., Greensboro, N. C.

Acute Intestinal Obstruction

J. E. Stokes, M. D., Salisbury, N. C.

Case Reports on Intestinal Obstruction

J. R. Young, M. D., Anderson, S. C.

Occlusion of Mesenteric Vessels

J. W. Tenkersley, M. D., Greensboro, N. C.

Intestinal Obstruction

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The Army, Its New Organization and Our Duty as Surgeons and Citizens

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Ocular Evidence of Intra Cranial Lesions

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Post Operative Treatment of Prostatectomy

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Regional and Spinal Anesthesia

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(Discussion opened by W. W. Fennel, M. D., Rock Hill, S. C. and R. E. Able, M. D., Chester, S. C.)

Cancer, Its Origin and Treatment

Julian M. Baker, M. D., Tarboro, N. C.

The Cancer Problem

Samuel Orr Black, M. D., Spartanburg, S. C.

Left Suprarenic Abscess Communicating With Right Side of Pelvis.

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DERMATOLOGY AND SYPHILOLOGY

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INFANTILE ECZEMA

Infantile Eczema, as the name implies, is a disease of infancy and early childhood. It is a disease that occurs largely in the winter months and while there are some cases in which ordinary remedies are usually very successful, the majority of cases are difficult to cure.

The literature on the subject is very extensive and the opinion as to the existing cause and the best methods of treatment are likewise very varied. For this reason I am going to present the best opinions on this subject as found in the recent literature.

Infantile Eczema and Examination of the Stools. Charles J. White, M. D., Archives of Dermatology & Syphilology, Jan. 1923.

The method advocated by Dr. White in this article consists first in an attempt to cure the skin without thought to the diet or examination of the stools. The mother is instructed carefully as to a proper hygienic life for a baby with infantile eczema. 1st. Baby not to be taken out of doors; 2nd. skin to be protected from too much heat, too much cold and wet diapers. 3rd. no soap or water should touch the eczematized skin. The following paste should be applied to the skin, care being taken that the paste is black, and never olive-green. Crude coal tar and zinc oxide aa. each, two parts corn starch and petrolatum of each sixteen parts. Before each application all remnants of the previous inunction should be removed with sterilized gauze wet with olive oil and the fresh ointment applied immediately.

This treatment to be continued for one

week. If at the end of one week, an improvement is noted the treatment is continued. If no better at the end of two weeks, the cause should be ascertained by examination of the stools.

In a series of 22 recalcitrant cases of infantile eczema he found that examination of the stools revealed certain abnormalities, the correction of which aided in the cure of these obstinate cases. Excessive fat occurs in 60 per cent; excessive starch in 40 per cent; excessive sugar in 20 per cent, and excessive protein in 10 per cent.

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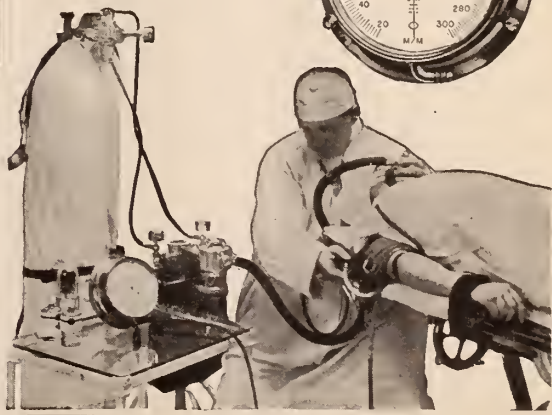
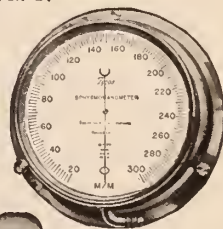
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The Journal OF THE South Carolina Medical Association

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GREENVILLE, S. C., MARCH, 1923

NO. 3

CONTENTS

EDITORIAL DEPARTMENT:

Lee County Organizes	421
Hampton to Reorganize	421
The Secretary Visits Charleston	421

ORIGINAL ARTICLES:

Does Adult Tuberculosis Begin in Infancy Always? by Wm. P. Cornell, M. D., Columbia, S. C.	422
The Medical Practitioner and the American Society. For the Control of Cancer by J. E. Rush, M. D., Field Director	429

(Contents continued on page ii.)

The Baker Sanatorium

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ORIGINAL ARTICLES:

Radiation by Leonard J. Ravenel, M. D., Florence, S. C. -----	432
The Spinal Fluid and Syphilis by H. M. Smith, M. D., Columbia, S. C. -----	437
Tuberculosis as a Public Health Problem in the South by E. Paul Knotts, M. D., County Health Officer, Newberry, S. C. -----	440
UROLOGY DEPARTMENT -----	442
PUBLIC HEALTH DEPARTMENT -----	445
SURGERY DEPARTMENT -----	444
SOCIETY REPORTS -----	446
ABSTRACTS -----	448

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EDITORIAL

LEE COUNTY REORGANIZES

Friday evening March 9th, the membership of the Lee County Medical Society were entertained at an elaborate banquet, by the Bishopville doctors, and their wives.

A special feature of this meeting was the reorganization of the society, and this was successfully carried through.

The Councilor, Dr. T. R. Littlejohn, and a number of visiting physicians from Sumter, and Florence, were present.

The participation of the Druggists and Dentists of the city, was an innovation that other counties would do well to follow.

HAMPTON TO REORGANIZE

On March 29th, President Willams and Councilor Hartzog will visit Hampton County, at Estill, and aid the members in

reorganizing the County Medical Society.

Dr. Hartzog has been very active in stimulating the interest of the county societies in his District.

THE SECRETARY VISITS CHARLESTON

The Secretary visited Charleston March 20th, and met with the various committees of the Charleston Medical Society in the interest of the approaching meeting of the State Medical Association April 17th, 18th, 19th. Suffice it to say that as usual the profession of Charleston will measure up to their reputation as hosts.

A special feature of the meeting will be clinics at the Roper Hospital, and the other hospitals of the city.

ORIGINAL ARTICLES

DOES ADULT TUBERCULOSIS BEGIN IN INFANCY ALWAYS?

By Wm. P. Cornell, M. D., Columbia, S. C.

On the occasions in which I have listened to discussions on the subject tuberculosis I have been impressed by the fact that no mention is ever made regarding tuberculosis in infancy and childhood.

Knowing that a large per cent of all children have been found to be infected with tuberculosis, wherever large groups have been tested, I have left these meetings with the feeling that something very essential had been left out of the discussions, and as though only part of the story had been told.

The question that stands out is: Why is not more stress laid upon the diagnosis of tuberculosis in its chronic latent stage in the child so that these hundreds of thousands of cases might be prevented from becoming activated into the thousands of adult patients which fill our sanitariums and cost such tremendous expenditure of labor and money.

Does adult tuberculosis always begin in infancy, and if so, is not the period of childhood the age at which the greatest good can be accomplished towards eradication of the "White Plague"?

How is the disease contracted? Intra-uterine infection, direct inoculation, and infection through food ingestion, are all possible and should be guarded against, but the one great mode of infection upon which we should center our forces is the tubercular patient whose sputum contains bacilli.

Portals of entry: Though tubercle bacilli may enter the body through any part of the skin or mucous membranes, the lung is by far most often responsible, the bacilli being inhaled from the throat. Next comes the intestinal mucous membrane, the bacilli reaching here in food usually, and third, stands the tonsil as port of entry.

The object of this paper being to emphasize the type of tubercular child which, through early diagnosis and proper treatment, can be saved from an active tubercular process lighting up in adult life, it is necessary to briefly review the route of invasion which leads to the chronic latent tuberculosis of childhood, as it is in this stage that our work must be done to prevent secondary extension symptoms from developing.

The primary lesion is always at the point of entry in the lung, intestine, or tonsil, but in the lung is so often overlooked, because of its slight character, that some doubt its existence and believe the primary lesion to be in the lymph nodes.

From the primary lesion the bacilli extend by the lymph channels; by direct extension; by the air passages; by the digestive canal, and by the blood.

The first extension in childhood, in the vast majority of cases, is to the nearest lymph nodes, by way of the lymph channels, which nodes are placed about the main bronchi and the bifurcation of the trachea. Here the disease locates itself while the battle progresses and the child tries to build up antibodies with which to immunize himself. The younger the infant the less chance it has, not only because of weakness incident to its age but because, at this age, it is usually subjected to constant and repeated doses of bacilli from the original source, usually its mother

It stands no chance while in this environment.

It is in this stage of the disease, before secondary extension from this set of glands can take place, that our diagnosis should be made. A secondary extension at this age usually means a hopeless prognosis as such extension results in tubercular broncho-pneumonia, tubercular meningitis or a miliary tuberculosis, all of which are helpless conditions.

As to the frequency of latent tuberculosis in children; Garahan & Iraola (1) found that 75% of the children, even though apparently healthy, responded positively to tests for tuberculosis. Opie (2) says "In a previous article I have shown that the lungs of almost every individual who has reached adult life (18 years) contain foci of tuberculosis which, occurring in any part of the lung and associated with tuberculosis of the regional lymph nodes, have the characters of pulmonary tuberculosis in childhood." "Almost every child is spontaneously inoculated or "vaccinated" with tuberculosis." "The early experiments of Koch confirmed by subsequent observers have shown that a first infection with tuberculosis modifies the course of a second infection." "Koch's fundamental experiment showed that the injection of tubercle bacilli into the subcutaneous tissue of animals already infected with tuberculosis caused a reaction at the site of infection more severe than that of the first infection, but the lesion did not progress and there was no involvement of the regional lymph nodes." "Fatal pulmonary tuberculosis of adults and of older children with few exceptions has its origin in the apices of the lungs and like the second infection of animals, produced by Koch and others, is unaccompanied by caseous lesions of the regional lymphatic nodes." "It is probable that the percentage of focal infections in adults is greater than that indicated by the tables (see vol. xxv. *Journal Exp. Med.*) and

closely approximates 100%, for in those instances in which no pulmonary lesion was found tuberculosis of lymphatic nodes in two instances demonstrated only by microscopic examination suggests the probability that corresponding pulmonary lesions had been overlooked." "The age incidence of focal tuberculous lesions of the lungs demonstrates that they have their origin in most instances in childhood." "In the period between 18 and 30 years at least 85% of all individuals have acquired focal tubercular lesions." "That focal tubercular lesions of the lung are occasionally acquired during adult life is shown by the slight increase in the proportion of those with these lesions as age increases from 18 years to old age." "After 70 years of age pulmonary apices of over half of all individuals are occupied by frankly tubercular lesions." Dr. Alfred F. Hess (3) States: "One of the most important advances in recent years in connection with the study of tuberculosis has been the realization that human infection by tubercle bacilli takes place usually during infancy or early childhood."

I borrow freely from this excellent article.

There are apparently more deaths from tuberculosis in the first year of life than occur during any other one year. Because of the frequent difficulty in diagnosing tuberculosis in the first year of life, doubtless many tubercular deaths are returned as "congenital debility," a group that comprises over one-quarter of the deaths of infants under one year.

Hess says: "It is evident, therefore, that, in our efforts to combat tuberculosis attention should be directed to the infant."

After the first two years of life a quiescent period gradually sets in as regards the development of clinical tuberculosis. Year by year fewer children die of tuberculosis although the number of infections steadily increases. During the first few years few deaths occur from pulmonary tuberculosis,

Table 1. Deaths from Tb. in N. Y. City, 1913-1917, show the following:

Age		Pulmonary	Other forms	Total
1st	Yr.	205	1064	1269
2nd	"	184	967	1151
3rd	"	98	604	702
4th	"	81	359	440
5th	"	74 (642)	280 (3274)	354 (3916)
5-9 " *		63	134	197
10-14 "		114	54	168
15-19 "		514	72	568
20-24 "		938	78	1016
25-29 "		1060	78	1147
30-34 "		1110	62	1172
35-39 "		1397	59	1356
40-44 "		1058	71	1129

*Figs. after 5yrs. of age are averages of quinquenniums.

the great majority being due to tubercular meningitis, but at ten years this is reversed and thereafter the great majority of deaths are due to pulmonary tuberculosis.

The above table of deaths shows that only one-fifth of the deaths during the first five years are due to pulmonary lesion, and that from ten years on the pulmonary type steadily increases as the other forms as steadily decrease.

More than three times as many deaths from tuberculosis occur in the first five years of life than occurs during any other five year period of life up to the fiftieth year.

Another remarkable showing of Dr. Hess' investigation is the sudden, invariable and marked increase in tubercular deaths at twelve years of age in girls, and at sixteen years of age in boys, as shown in the following table:

Following explanatory reasoning for this sudden increase Dr. Hess concludes: "It is more logical to regard this sudden flare up as an activation, at the time of maturity, of some lesion in the bronchial gland or in the lung, which had remained latent from early childhood."

In a foot note he says "The fact that the soldiers develop tuberculosis generally within a month or two of their entrance into active service is probably best interpreted as the fanning into activity, through the stress of hard life, of old foci of disease."

Brown, Petroff and Pasquera, of Trudeau, New York, (4), throw interesting light on the question of the means by which the tubercle bacilli are transferred from one person to another. They, in experimentation upon guinea pigs for tubercular infection, tested dust of rooms, telephone receivers, eating utensils, infected hands of

Table 2. Deaths from Tb. in N. Y. City according to sex and 5 yr. Periods.

Age period years	1916				1917		All forms				Grand Total
	Pul.		All forms		Pul.				Total		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
3-5	54	51	371	308	67	45	403	337	895	741	1636
5-9	23	22	84	78	23	25	92	88	222	213	435
10-14	31	75	57	105	33	79	62	100	183	359	542
15-19	209	292	251	328	215	306	248	338	923	1564	2486
20-24	456	436	494	475	508	566	541	502	1999	1879	3878

patients, the saliva of tubercular patients, transmission by kissing, infection of tooth brushes, the danger of flies, and the danger of coughing. Patients with numerous bacilli in their sputum, and coughing, both from the Sanitarium and from their homes, were selected for the tests. The tests, which are described in detail, were carefully carried out, and their conclusions are set down as follows: "The dangers of infection from dust of rooms, from telephone receivers, from properly cleaned eating utensils, from infected hands through hand-shaking or from door knobs, and the danger from transmission by infected flies,—have not been conclusively proven and these experiments tend to belittle it. On the other hand, the danger from kissing, or by the use of eating utensils which have not been properly cleaned, is shown."

Realizing that the large majority of apparently healthy children have this latent chronic tuberculosis we should be particularly on our guard in searching for it in every child to whom we are called, especially when we find them below weight or presenting anaemic appearance.

We must remember that there are no diagnostic symptoms of this latent stage, and that it exists without any clinical evidence whatever.

When symptoms do exist they are usually manifestations of secondary extension and we have missed the first stage.

The three general symptoms of tuberculosis in childhood, and which usually indicate secondary extension are, fever, emaciation and anemia.

The pathology of the first stage is that of enlarged bronchial glands, and these may, or may not, through pressure, produce a dry, irritative and often paroxysmal cough suggesting pertussis, except that it does not progress as does that of pertussis. Also expiratory dyspnoea is sometimes seen, from pressure on the bronchi and trachea, especially after crying or coughing.

Inter-scapular percussion dullness when obtained is quite diagnostic.

D'Espine's sign consists in an extension downward below the seventh cervical spine in older children, and below the third cervical spine in infants under two years of age of the bronchophony normally heard over the cervical spines. It is easily recognized and should be listened for every time examination of a child's lungs is made.

Röntgen Ray shows a shadow from the glands along the bronchi if they are enlarged, but those at the bifurcation of the trachea, unless quite enlarged, may be hidden by the spinal column.

Von Pirquet's skin test is now part of the routine examination of all children at most of the large centers, and the day will soon come when our efficient State Health Department will add this to its other progressive measures in preventive medicine.

A positive skin test is evidence of the presence of antibodies which are formed only from the presence of active bacilli in the body somewhere. A negative Von Pirquet does not exclude tuberculosis, and it is generally negative in tuberculous children with the following: Miliary tuberculosis and tuberculous meningitis; during measles; after treatment with tuberculin; in very active stages of secondary tuberculosis; and in very poorly nourished children.

Dunn (5) considers the presence of any of these three signs (D'Espine, X-Ray shadow and Von Pirquet) sufficient to diagnose probable chronic tuberculosis, and the presence of either D'Espine's sign or a positive X-Ray, makes the diagnosis practically certain.

The first two, every doctor can do himself and the X-Ray expense will be gladly borne by parents when they understand its value to their baby.

As to prognosis in infancy. Dunn quotes Hahn as follows:

Time of infection	Died	Lived
0 to 6 mos.	87%	13%
6 to 12 "	74%	26%
1 to 2 yrs.	61%	39%

Amongst those who survive there are no reliable statistics as to how many become activated later in life.

As to the time of infection in infancy Hess quotes Bass' figures on four hundred children under six years of age as follows: (over 1000 tests)

Age	Cases Tested	Positive Reactions	Pr. Ct.
1 - 6 mos.	51	4	7.8
6 - 12 mos.	38	6	15.8
1 - 2 yrs.	29	5	17.2
2 - 3 yrs.	45	14	31.1
3 - 5 yrs.	28	12	42.8

Also, that 75% of the children between five and six years were positive.

Though I am not able to answer the title question of this paper with an unqualified yes, still I think the statistics quoted warrant us in the conviction that the very vast majority of cases of adult tuberculosis have been lying dormant throughout the individual's life and that, had it been diagnosed in infancy or childhood, and appropriate treatment instituted and kept up, the chances are that he would not have developed into an active pulmonary tuberculosis later on in life.

How can we prevent our infants and children from becoming infected with tuberculosis and how can we arrest it while latent, or limited to the first set of lymphatic glands?

The only way to prevent their becoming infected is to prevent contact between them and another person who has active (sputa positive) tuberculosis. Hess shows that though any member in the family who has infective sputa is a source of danger, that by far the most frequent person to infect an infant is its mother, and it is now recognized that it is practically impossible to prevent infection of the baby unless it is

separated from the mother entirely. This sounds cruel in the extreme but can anyone imagine a mother wishing to deliberately infect her baby when she realizes what certain death she is subjecting it to by keeping it with her? This applies to any other members of the household who have active tuberculosis. Who of you have realized that half of all people over seventy years of age have an active tubercular process in their lung? This means that the grandparents should be particularly scrupulous in learning their status as to tuberculosis before fondling their children's children. Sisters near their twelfth year and brothers near their sixteenth year, who have any cough, should be persuaded to leave the baby alone. Therefore, if possible, remove the baby from the home, and if this is not possible at least keep it away from the others present. If, at every discussion before the public upon tuberculosis, attention, commensurate to its importance, were paid to this child phase of the subject, I feel sure much less adult tuberculosis would be encountered in the future.

Dr. Hess writes of Tuberculosis Preventoriums, places where the infant of the tuberculous mother can be placed for at least a year, and where children in the first or latent stage can be cared for and scientifically supervised, and where the girls and boys at the maturing age may be held under observation. Would that we could realize this state of perfection!

Our first job is to educate ourselves to be on the lookout for, and to recognize, tuberculosis in the infant and child, then, when we have realized the necessity, we begin to think of Preventoriums.

Time limitation prevents a detailed discussion of treatment of latent tuberculosis. It can be briefly summed up under four main headings, namely, regulated rest and exercise, maintenance of proper nutrition, avoidance of repeated exposure to fresh infection, and fresh air day and night.

Probably Heliotherapy should also be included.

(1) Garahan & Iraola. *Excerpt*, J. A. M. A., Aug. 30, 1919. Frequency of Latent Tuberculosis In Children.

(2) Eugene L. Opie. *Jour. Experimental Med.*, Vol. XXVI., Pg. 263.

(3) Alfred F. Hess. J. A. M. A., Jan. 11, 1919. The Significance of Tuberculosis in Infancy and Childhood.

(4) Brown, Petroff & Pasquera. J. A. M. A., Nov. 22, 1919. Pg. 1576. Etiological Studies in Tuberculosis.

(5) Dunn. *Pediatrics*.

DISCUSSIONS

Dr. F. A. Coward, Columbia:

There are two diseases, we might say, which have created the public health work of today. One is rabies and the other is tuberculosis. It seems to me an unfortunate thing that in our present scheme of fighting infectious diseases we have included tuberculosis along with typhoid fever, scarlet fever, measles, smallpox, etc. It does not belong there. After thousands of autopsies it is safe to say that every person has tuberculosis at some time in his life. Due to his makeup or something he overcomes it or succumbs to it in childhood or adult life. I do not believe that tuberculosis should be handled by us in public health work today as we are handling it. The infection is there. How many of you have seen a case of actual contact tuberculosis where there was another case in the house? They must be very rare. We have to educate the people and eradicate the thing at the roots. Now, doubtless milk will give bovine tuberculosis to a few children, it will give them swollen glands in the neck, etc. Doubtless some of those cattle have human tubercular infection, which is very fatal to cattle. The chances are that we do not get much milk from such cattle. The problem of tuberculosis must be dealt with in a little different way from the way we fight smallpox, etc. I do not believe that it comes primarily from immediate contact—not that I would do away with the care of the sputum, etc., but we have to fight along different lines.

Dr. W. F. R. Phillips, Charleston:

I think with Dr. Coward that we have to look at tuberculosis, so far as curing it is concerned, from a different standpoint from that of the ordinary contagious diseases. Briefly, my views are as follows: Tuberculosis will not grow in a soil not suitable for it. If we make the soil unsuitable we need not worry about anything else. The germ itself is practically ubiquitous. We know very little about it. We do not know whether it passes from bovine to human, or through a vein, or anything else. The method of infection has been fought over and fought over, and is still a matter of polemics. All we know is that it does come, and comes practically to everybody. I have never seen in the dissecting room a pair of lungs from a person over forty years of age that did not show evidence of active or healed tuberculosis. We all have it. What we have to do is to find out what is wrong with the person's makeup and restore the individual to a fighting condition, and then he will be able to take care of himself. Now, some people come into the world utterly unable to fight it. When we find a person that comes from a family that has had tuberculosis and tuberculosis and tuberculosis, that person is a very unfavorable subject for tuberculosis, and here is where we come in conflict with nature's laws and try to save the unfit. That may be a cruel thing to say, but it is true.

A few years ago I studied the question from an anatomical point of view and presented a hypothesis in which I endeavored to explain why, though in infancy and childhood it is confined to the lymphoid tissues, in adults it affects the lungs. From a physiological point of view, evidently a change has been produced in the tissues. Of the nature of the change we are ignorant. One explanation may be in the effect of the change from the pronograde to the orthograde status. The monkey has the same lesions as the child. It is when we assume the orthograde posture that we change our resistance. We shift from the lymphoid tissues to the respiratory tissues. The apex is the most vulnerable part in man, and the dorsal lobe in the animal. Various hypotheses have been advanced as to why the apex is the vulnerable point—that it is not aerated enough, does not get enough expansion, interference of ribs, different effect of atmos-

phic pressure on the apex, etc. This does not hold true when we go to comparative anatomy, for the dorsal lobe of the bovine is the most mobile, the most ventilated point of the animal's lung, and it is the most susceptible portion to infection. The only feature that is comparable is that it is the highest point so far as the distance from the earth is concerned. It is probably a diminution of the circulation that leads to the development of tubercle bacilli in these two portions of the lungs, apex in man, dorsal lobe in the bovine.

As to the theory of latent tuberculosis, that a child can carry tuberculosis from infancy latent and have it suddenly flare up, I can not agree to it. It does not seem compatible with the function of the lymphatic tissue. The lymphatic tissue is the protective, fighting tissue of the body. When we find that lymphatics are chronically swollen, it simply means a want of resistance, a want of ability to fight. I can not conceive that germs will stay in the lymphatic glands, the factories of the white blood cells, for years, and then suddenly flare up. It seems to me much more likely that, due to the ubiquitous germ, the person is likely to be re-infected when caught off guard.

Dr. Wythe M. Rhett, Charleston:

I just want to put myself in line with Dr. Cornell on this subject, and to mention not only the infection from the mother, but also from the nurse. The habit in the South, where the negro nurse is the chief nurse for the child, is to accept any one who will come regularly. The incidence among the negro race in the South is very great, and the nurse, in a great many cases, has active tuberculosis, so that the incidence in the white race, among children, stands a chance of being very high from contact with the colored nurse. The nurse coming into a white family should be scrutinized very carefully, and referred to a physician to exclude, as far as possible, active tuberculosis, before being allowed to nurse a child.

Dr. Cornell, closing the discussion:

Dr. Phillips rather knocks the props from

under me. His inference is that there is something in the human makeup which makes us contract tuberculosis. Does he mean to belittle the bacillus as the cause? Only eight per cent. of babies before the first six months are infected in Besses statistics. That percentage rapidly increases until at the end of the sixth year, 75% show infection. At what age in life does so much kissing occur as in the first five years? The experiments carried out at Trudeau, N. Y. showed that kissing is almost absolutely fatal, you might say, and if it is true that over fifty per cent. of all lung apices show active tuberculosis after the 70th year of life, I think that the probability is that over ninety per cent. of all people over seventy years of age who cough have tuberculosis, and are a menace to their grand children.

Dr. Parker used to teach me that at puberty the adenoids and tonsils would retrogress and disappear. Possibly Dr. Phillips' explanation about the adenoid tissue being the protective tissue may be the explanation, through its disappearance at puberty, for the sudden increase of tuberculosis of this age. Dr. Hess showed, in some very remarkable statistics, a very marked and very sudden increase in deaths in girls at twelve and boys at sixteen. Does the retrogressing of adenoid tissue, then, wipe away our resistance at these ages? We must not forget that the tubercle bacillus is the cause of tuberculosis, so far as we know, and in infancy the child is subjected to infection in repeated and massive doses, which he can not overcome. They are getting marvelous results in the North in the preventorium, as they are called, where the resistance is built up through rest, sunshine and good food, and many of the children are cured.

Question: Do you believe that a tubercular mother can infect a baby through breast feeding, or make worse a tuberculous baby?

Answer: No, I do not believe that the infection comes through the milk. But if the mother is tuberculous and has the baby at her breast she will infect it through kissing coughing and sneezing.

THE MEDICAL PRACTITIONER AND THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER.

By J. E. Rush, M. D., Field Director.

Among the most important public health problems confronting the medical profession today is that of cancer control. It is possible to make a division of public health movements into several groups, depending on the amount of educational work which must be carried out before the program can be successful. In one group we find such diseases as Typhoid Fever, Malaria, and Yellow Fever which may be controlled simply by educating a few individuals who possess the necessary power in a community to place the program in operation after they have been shown the desirability of such a procedure. This type of activity is relatively simple because it depends upon the education of a few individuals. Unfortunately, the diseases that can be controlled in this manner are among those which usually do not exact from the populace the greatest economic toll.

Another group of diseases may be effectively dealt with through police power and here again we depend on the education of a few members of any given community. For the most part the diseases which may be controlled by this means we refer to as "communicable" and usually they can be very effectively dealt with by placarding, isolation and quarantine.

There is another group of diseases which are not communicable and in which the education of but a few members of the community is not sufficient to affect the mortality rate. Here, we find cancer, which depends for its ultimate control upon the education of every single adult of the community, with reference to the early signs and symptoms of the disease, for only in its

early stages is cancer curable. With the present attitude of the public to seek medical advice only when they are aware of distressing symptoms, they must be told that early cancer is usually painless and that proper treatment cannot be instituted until they have sought the advice of a physician.

The medical profession is interested in all types of medicine whether preventive or curative. As a matter of fact, there really is no hard and fast line of demarcation between preventive and curative procedures any more than there is a dividing line between the metals and the non-metals. The medical profession is interested in all problems of public welfare but when it comes to matters concerning public health they are the only ones who through tradition and training are capable of handling the problems which present themselves for solution. It is the only profession at the present time that is engaged in real preventive medicine and it is the profession of election for this type of work. Usually public health movements have been initiated by the medical profession but in many instances the work has passed into the hands of the laity because the members of the medical profession have been pre-occupied with other important problems.

What we have said with regard to the attitude of the medical profession towards public health work clearly emphasizes the need of control by the medical profession of all public health movements. The profession is particularly interested in the problem of cancer control not only because it is of great humanitarian interest but because of the further fact that cancer is one of these conditions in which it has been clearly demonstrated that the medical profession is the only one capable of offering a solution. While sanitary engineers, epidemiologists and others may be of great value in the conduct of specific public health movements their training and experience does not make them capable of helping in cancer control. The slogan of

the American Society for the Control of Cancer that "Early cancer is curable if you will but consult your medical practitioner in time," again clearly emphasizes that the physician is the only one capable of reducing the mortality from cancer.

Another interesting feature of the movement for cancer control is that the establishment of diagnostic clinics during National Cancer Week is of some educational value to certain members of the medical fraternity because important points of differential diagnosis between early carcinoma of tongue, for example, and primary luetic ulcer, are demonstrated. The cancer movement in this respect, is one of the few that attempts to repay the physician for the great effort he has expended in its behalf.

It has been claimed by some of the unthinking individuals among the laity that preventive and curative medicine are diametrically opposed. They do not realize that there is, in the last analysis, but little difference between preventive and curative measures. For example, all physicians take blood pressures and make urine analyses during the course of a pregnancy and not by the wildest stretch of the imagination can this be interpreted as a curative measure,—it is a preventive measure pure and simple.

Through various educational movements which are now being conducted to instruct the public with regard to conditions which are definitely preventable; the great mass of the people are gradually coming to realize that the physician must be looked upon as a teacher and adviser rather than one who is to be consulted only when symptoms of a diseased condition have manifested themselves. The physician, too, realizes that this teaching attitude is appreciated by the public for by this means he is able to prevent premature deaths among his clientele. Not only does he spare the patient in question for future usefulness but, more important, he does not divorce the rest of

the members of that particular family. The physician realizes that the most appreciative patient is one who, through early advice and proper instruction, has been saved from untold suffering and an untimely death.

All health movements if properly managed and ethically controlled by the medical profession will not only eliminate certain objectionable features present in some of them as now conducted by the laity (who have no appreciation of medical ethics) but such activities will help consolidate the medical profession against the ever increasing influence of the cults. It is true, that we as a profession, do not heartily approve of certain public health movements now in progress, because they do not conform to our ethical code. If they were controlled by the medical profession this objection would be removed.

It must be realized that the cults never would have existed had the medical profession taken a definite stand against them, but realizing that "Imitation is the sincerest flattery", we have allowed them to go on;—to exploit the public until even the great mass of the people has recognized the lack of sincerity which prompted the various movements.

The proper extension of these ideas relative to organization in order to control public health problems contains within it the answer to the proponents of that most preposterous type of activity known as "State Medicine."

The organization for cancer control is dependent upon the activities of the medical profession; and therefore the units upon which the organization is built are the State and County Medical Societies. The whole movement has been endorsed and approved by practically all national, sectional, state and local, medical and surgical bodies, because it is entirely controlled by the profession itself. In the perfected organization for cancer control, we have the ground work to handle other problems of a public

health nature; be they ones already in existence or future ventures. By proper organization, too, we shall be in a stronger position to abort detrimental legislation, whether directed at us or to legalize the ignorant cults. A public health problem directed solely by physicians will do more to properly organize the medical profession than any other type of activity.

It has been pointed out that if we do not seriously consider the "scientific attainments" of the cults, then every preventable death is a reflection on us. It has been claimed that the fact that the patient did not come early enough to us for examination and advice is no excuse;—that we, as the only logical profession engaged in the practice of the healing art should have the undivided confidence of the public to such an extent that they will report to us what are very trivial matters and thus give us opportunity to institute proper procedures in time. In the vernacular of the street, it has been suggested that we should "sell ourselves to the public"; which in other words means that there is at the present time a great need of ethical publicity on the part of the profession. It really seems that this would, to a very great extent, increase our usefulness to the community in which we practice. If this is true, then no physician can be so busy that he cannot devote a small amount of time to help in the campaign for cancer education, because by so helping, he is not only advancing his own usefulness to his community but is of the greatest value to his medical brothers and to his profession.

A few members of the laity have explained what they have interpreted as apathy on the part of certain of the medical profession toward preventive medicine, by emphasizing the fact that preventive medicine was diametrically opposed to curative measures. We of the medical profession realize the fallacy of this. Let us consider an analogy from the field of engineering.

Suppose that ten engineers were bidding on a contract to construct a road between two adjacent cities. Only one, could be successful but would the others put obstacles in the way to prevent him from completing his task? The answer is apparent. They would not; for they would realize that when the public had seen the value of this road, they would demand similar ones in all other directions and hence the other engineers would have an opportunity to build some of them. I realize that the above example compares a business conducted purely for monetary return, to a profession which interests itself chiefly with humanitarian efforts, but the very few of the public who believe that all persons are actuated by ulterior motives should be answered. The good roads analogy applies directly to medicine, for the medical practitioner realizes that each time the public is convinced that it is unnecessary for them to suffer with various ailments they demand the removal of others which heretofore they patiently tolerated. An example may illustrate this point:

A friend of mine who for many years was almost an invalid from recurrent attacks of what was then diagnosed as "inflammation of the bowel" and for which, at that time there was no known cure, was simply forced to allow the condition to exist which undermined his health and lowered his efficiency. At the present time because of the knowledge of the laity concerning chronic appendicitis he would know that an operation requiring him to be at a hospital for but two short weeks, would give him complete relief, and enable him to resume his life's work at a greatly increased efficiency.

Our medical ethics instituted at the time of Hippocrates admit of no change; but our interpretation of them may be broadened to meet the changing conditions: especially those which have been brought about during the past two or three decades.

It may be necessary to change our ideas regarding proper non-personal publicity for the medical profession as a whole and for our state and county societies. In this connection I am reminded of the story of the young color-bearer at Gettysburg who had advanced somewhat ahead of the lines, and when ordered back to his position by this commanding officer replied, "Bring the line up to the flag."

RADIATION

By Leonard J. Ravenel, M. D., Florence, South Carolina.

Much is being said and written of the therapeutic uses of radium and X-ray. One in daily touch with the subject can keenly appreciate the vast difference of opinion being expressed up on its numerous phases, and consequently is easily led to assume others more remotely concerned find it difficult to draw satisfactory conclusions from what they hear and read. For this reason the writer desires to present certain known scientific facts, to set forth established laws governing the uses and action of these remarkable agents, and to mention a number of objective clinical results attestable from personal experience and observation; all forming a definite basis for their employment.

Radium is an element. It is marketed in the form of one of its salts, usually the sulfate or chlorid. Such salt emits rays of three kinds, designated as alpha, beta and gamma, at constant rate and ratio. The alpha and beta rays are not very penetrating; the latter most so and are stopped entirely by about 1 cm. of soft tissue. The alpha rays can be completely arrested by a sheet of thick paper. On the other hand, gamma rays represent the most penetrating radiation known and can traverse tissue the thickness of the body with but little loss by absorption.

X-rays are formed from atomic disassociation occurring in vacuo under electrical stimuli. The beam from any tube at any degree of excitation contains heterogenous components; that is, rays possessing such varied degrees of penetration as to render them analogous to those from radium.

The degree of penetration of any ray is determined by its wave length. Because of the characteristics of the element, wave lengths of alpha, beta and gamma radiation are fixed and unalterable. With roentgen rays, however, the maximum of penetration is fixed by the amount of voltage at which they are generated, the greater the voltage the shorter the wave length, and vice versa, although as previously stated, regardless of all factors, and roentgen beam contains very variable components in this respect which for sake of convenience are referred to as "soft" and "hard", the latter being made up of the shortest rays. In order to duplicate the wave length of the gamma ray of radium in the X-ray spectrum it would be necessary to excite the tube at approximately a million volts.

It will thus be seen that both roentgen and radium radiation is heterogenous. Should it be desired to employ only the more penetrating portions of the beam or spectrum it becomes necessary to arrest the less penetrating, and in practice this is done by interposing between source and tissue certain metals to act as filters.

The passage of radiation through tissue or matter sets up other rays spoken of as "secondary." These have quite long wave lengths and are hence quickly arrested by the substance in which they are formed. The amount of secondary radiation generated is in direct proportion to the amount of primary going through, irrespective, within very wide limits, of the wave length or velocity of the primary.

Inasmuch as it is conceded that under proper conditions the biological action of

radium and x-rays are the same, we become more concerned clinically with methods of applying them to best advantage than attempting to use one agent in place of the other from any fancied greater benefit to be derived from it. The selection is determined very largely by and from physical laws governing the concentration and divergence of light, which in substance mean that intensity of radiation varies inversely as the square of the distance.

The biologic reaction taking place in radiated tissue extends from stimulation of the cells in their vital processes to degeneration and necrosis. In order for reaction to occur, however, it is absolutely necessary that radiation be absorbed. In other words, it is the ray arrested or taken in by the cell, whether it be of primary or secondary character, that causes effects, and not the ray which goes through or traverses it. The amount of reaction is thus in proportion to the amount of absorption. This apparently lost sight of occasionally in the maze of other factors wherein substitution of more favorable type of radiation from a strictly physical viewpoint detracts from the real purpose. While considering the biologic effects of radiation it is well to point out also that normal cells vary in degree of radio-sensitiveness just as do those comprising malignancies, though fortunately the latter are as a rule considerably more susceptible than the average normal.

Owing to the terrific expense of radium, very few individuals or institutions possess much over 100 milligrammes. This quantity, or a larger, owing to the factors involved, does not admit of external application for deep therapeutic purposes, and when this is attempted resort must necessarily be had to the X-ray which lends itself much more favorably.

In the X-ray field we have a choice of two types of apparatus yielding respectively 140,000 and 225,000 volts, and tube cúr-

rents of from 5 to 8 milliamperes.

Because of the fact that radiation of increasing penetration is produced as voltage is raised, machines and tubes of higher capacity obtain such advantages as may be derived from rays of this type, and when used in the treatment of deep seated conditions can without doubt supply the theoretical dosage deemed necessary below the surface expressed in terms of *unabsorbed* primary radiation, in less time than can be done with machines of lower voltage ratings. However, the same total of unabsorbed primary ray can be attained at the same depth with apparatus of the latter type by increasing the number of portals through which the energy is directed into the body, as can be demonstrated practically and theoretically. This entails a longer time to which the patient must be subjected to radiation and corresponding inconvenience. But it is likewise true, because of the facts hitherto enumerated and especially those relating to changes in tissue (which are dependent upon absorption) that when a same amount of radiation is gathered at a specified distance from the surface by the methods described with the lower voltage appartaus, the co-efficient of damage is greater in it per square centimetre and per unit of radiation volume than is the case when more penetrating rays are employed. This happens from relatively greater percentage of primary radiation absorption occurring per centimetre at lower voltage generation. It may be said here in debating this point that on the other hand the difference is offset by secondary values accompanying the proportionate less degree of absorption of primary rays of shorter wave lengths but such is not strictly the case, because, while granting for the sake of argument that both secondary rays and absorbed primary rays are capable of causing equal effects measure for measure, at the same time in order to

reach an approximation in terms of biologic reaction, the particular tissue would have to be acted upon considerably longer by the more penetrating radiation, which, in practical applicability, would cause too much damage in interposing material when only a few points of entry are used for it in deep work.

A clinical demonstration of the relative effects of rays of opposing degrees of penetration can easily be made upon the body surface by exposing separate areas to equal quantities of long wave length radium beta radiation and short wave length radium gamma, whence the difference (conservatively 20:1) necessitates a great increase in the duration of exposure by or from scopic cellular change. Inasmuch as little, if any, absorption of gamma the gamma in order to bring about an equal degree of microscopic and macro-rays can take place within tissue the thickness of the epidermal and dermal structures, it is obvious that any reaction showing therein from them is directly the result of absorption of secondary rays set up by their passage. Thus is afforded indisputable evidence that the secondary radiation effects cannot counterbalance those derived from primary radiation absorption when even volumes of the two types of rays are administered within given periods of time.

The depth dose should therefore not be altogether reconed in terms of primary radiation reaching it but rather in terms of primary absorption occurring in that level, plus such secondary values as may occur, and the rule can be formulated, that whether in deep therapy or superficial, the object should be to apply to the diseased area the least penetrating radiation possible in order to secure the maximum of damage to the cells comprising it.

It is obvious that a certain degree of penetration is absolutely necessary in deep work, but ultra-voltage, meaning ultra-penetration, will probably not be accepted

in the future, notwithstanding it admits of more homogenous irradiation of different layers because as explained, when in to the initial amounts of energy from two types of rays are the same at the surface, there is not as much absorption occurring per unit volume beneath from those of short wave length, and hence proportionately much longer exposures must be made with them before the same biologic effects to be accrued are produced in a given tissue. Consequently, when employing high voltage for deep therapeutic purposes as afforded by some of the new machines, exceeding care must be taken that stimulation is not brought about in the tumor instead of destruction, and conversely destruction instead of stimulation in the normal tissues.

As arguments for the employment of higher voltages, we are told that clinical results become better and that patients are subjected to less inconvenience from the shorter time of exposure. The last is admitted, but it must be remembered that these higher voltage applications are of quite recent origin, and coincident with their adoption by certain operators the amount of radiation was enormously increased as permitted by the use of heavier filters and much more attention was paid to depth distribution. These factors, more than anything else, improved the statistics. Yet as has been outlined, a corresponding increase in the amount of radiation at lower voltage, when administered through more portals, will make the results equal or better because the biological changes are greater, and time will tell the tale. I wish to state in this connection that immediate results from the lower voltage apparatus have been greatly enhanced in our hands by the use of newer technique applied to it. I fully agree with Opitz, who, in speaking of treating cancer by radiation says "we should not treat cancer, but cancer-sick human beings," but at the same time I do believe when we are

dealing with this horrible malady we should do the best we can to destroy it if even at the expense to ourselves and patient of such time as is occasioned by the use of 140,000 volts at 5 milliamperes, for I am in accord with the adage which holds "the longest way 'round is the shortest," and consequently the surest.

It was not my purpose to enter into such a lengthy discussion of these principles, but it became necessary as the thought arose that we should not let enthusiasm get the better of judgment in the sense of recent developments principally embodied in heavier apparatus, for, while not meaning to belittle any of the work connected with it, which I greatly admire, it is none the less true that science sometimes requires a considerable time to recognize that which to close observation is *prima facie* evidence. The writer is well conversant with theoretical considerations used as a plea for higher potentials in deep therapy, but is of the opinion some of them will undergo revision in the light of subsequent experience wherefrom it will be found that error is committed in assuming that if an erythema is effected on the skin equivalent reaction becomes established at the nether point when the measurements at each correspond, since said measurements, especially at the latter, by iontoquantimeter or photograph, do not altogether mean or should not be read to altogether represent intensities of *effective* radiation. All in all the subject is a complicated one deserving much deliberation and the precepts of some of its features are worthy of close study.

What has been discussed would merely represent very interesting phenomena were it not applicable to the alleviation of numerous human ills, and therefore it is desired to briefly summarize what we know can be done with radiation from what we have witnessed, and at the same time classify certain indications for its use.

To begin with, we consider that cancer is not primarily a surgical disease, because

when cancer becomes established it has generally advanced to structures beyond reach of the knife, and when in its earliest stages can generally be eradicated to better advantage by non-surgical measures. The dread cancer of the uterus is well illustrative of this statement, and we now have a number of apparent cures where X-ray and radium treatment was instituted in both extremes of development. One of these cases had presented upon admission ulceration of the cervix, cauliflower-like masses in the vagina and fixation of the organ. Approximately a month following the radiation laparotomy was performed for other trouble whereupon the uterus was found to be shrunken, movable, and almost cartilaginous in consistency, with fibrotic changes throughout the pelvis and no evidence of malignant disease, as was also noted from inspection of the vaginal vault. In cases of this type we have inserted radium needles locally and have cross-fired from without with the X-ray tube.

A patient under our care with carcinoma of the caecum has been so benefitted from X-ray treatment alone that the mass which filled the right lower abdomen has entirely disappeared, accompanied by subsidence of the symptoms and a gain in weight of thirty pounds.

We find that cancer of the stomach lends itself less favorably, mainly because of the difficulty in administering sufficient dosage due to the severe reactions occasioned from large amounts of radiation given in this region. However, we have a case that has been kept comfortable for two years who suffered a recurrence at the pylorus following partial resection and gastro-enterostomy.

Our results in a series of cases of cancer of the breast presenting axillary and clavicular metastases have been poor from following the custom of pre and post-operative raying plus surgical removal of the gross mass. We are much inclined from a number of reasons to discontinue

this combination in the future and employ only radiation. It would appear, however, that mammary carcinoma will continue to maintain one of the worst ultimate prognosis in the realm of malignant disease.

Certain forms of sarcoma appear very amenable. As an example I refer to a growth the size of a football filling the right axillary space and extending below it, of which all visible traces have gone succeeding one massive treatment with roentgen rays, and there has been no evidence of local or remote recurrence since the work was done six months ago. We have also obtained improvement and relief in some patients suffering from osteo-sarcoma which is considered extremely resistant to all forms of treatment.

Epitheliomata and carinomata upon the surface have completely succumbed in practically every instance out of a conservative total of fifty cases treated by us comprising growths covering small areas to extensive and advanced processes. One of the latter had eroded so deep as to expose the large carotid vessels, and this responded to X-ray so that its site is now occupied by fibrotic tissue with very little deformity and complete cure so far as can be ascertained.

Space prohibits further discussion of the subject of malignancy, and in concluding it I wish to say that while the word "cure" is a bad one to use in referring to the treatment of cancer, there can be no question but that very remarkable and hitherto unattainable results are being brought to pass through therapeutics with radiations, and the vast majority of cancer patients have every reason to anticipate, if not eradication, marked recession, relief from suffering, and prolongation of life.

It is not to be surmised that cancer offers the only field of usefulness for X-ray and radium, as even a larger one is had in the treatment of benign pathology. Under this heading, a consideration of hemorrhage from the non-pregnant uterus is

quite applicable because of its frequency, and resistance to ordinary measures adopted for cure or relief. Fibroids are often a source of pernicious bleeding, particularly the submucous and intramural varieties. The surgical attack implies total or sub-total hysterectomy, and hence we feel it should be limited to those very large tumors causing pressure and other symptoms, and to others that are largely cystic or contain wide areas of calcification, since the remainder can readily be removed with either X-ray or radium. The profession has come to realize that hysterectomy is the last court of appeal in myoma of the uterus, and need seldom be resorted to if radiation is used. The common and persistent bleeding taking place at the two extremes of menstrual activity is so amenable to radiation that this is now a "closed book". A large number of cases within our experience furnish the substance for these remarks.

In hyperthyroidism we have come to confine operation to these cases associated with extremely large tumors, and even these are subjected to radiation before the patient is subjected to the knife in order to restrict the tax and danger attending rapid absorption of large amounts of thyroid secretion as accompanies and immediately follows operation. We possess a very close check upon what is happening through estimations of the basal metabolic rate. Radiation accomplishes no result in colloidal or cystic goiters. It might be mentioned we have treated two cases of hyperthyroidism by this method that developed after operation performed to remove the greater proportion of the gland, and we believe these patients would have been spared the scars and inconvenience had they first been treated with X-ray.

As to the thymus, a case is recalled of a male child suffering from dyspnoea and cyanosis due to its persistence, where X-ray treatment afforded a complete cure as shown by disappearance of the gland from

radiograms taken before and after, and total relief clinically. He has developed into a sturdy boy without experiencing further trouble.

Several cases of Hodgkin's disease have undoubtedly been benefitted far beyond the prognosis allowed in the past. One in particular with a glandular collar and mediastinal growths has been able to resume his regular duties and has remained free of objective and subjective signs of the malady for a considerable time. The transformation from a weak, thin and anaemic individual to one of robust strength was in his instance nothing short of the miraculous.

We have cured many people of certain intractable skin lesions, notably eczema, pruritus, naevi, keloids, lupus erythemato-

sus and vulgaris, tuberculous glands, etc.

I have attempted to draw upon our experience to show in a general way types and forms of disease where radiation is not only applicable, but where it offers the most chance for cure and relief, while not calling attention to all of them as is beyond the premise of this article and we have no doubt but that our observations are in line with those of others similarly engaged.

What the future will have in store it is difficult to surmise. It appears to the writer that broadening of the scope and efficiency of radiation is dependent upon additional knowledge of the biologic changes it is capable of producing, rather than from improvement in appliances. We must first learn to use that which we have.

THE SPINAL FLUID AND SYPHILIS

By H. M. Smith, M. D., Columbia, S. C.

Examination of the blood gives no indication of syphilis when the lesions are strictly confined to the neural tissue of the central nervous system. A negative blood Wassermann means nothing so far as central nervous system involvement is concerned, for there are various types of neurosyphilis without any positive blood reaction. When there is an associated vascular involvement, as is often the case, then we may expect a positive Wassermann reaction of the blood.

On the other hand, various types of neurosyphilis may or may not give positive spinal fluid findings, dependent upon the character, type, and stage of the neural involvement. But before considering this phase of the subject in more detail, allow me to make mention in particular of the four spinal fluid tests that are of especial value in the diagnosis of neurosyphilis, with some remarks concerning each.

(Read before the Second District Medical Society July 19, 1922, Columbia, S. C.)

1. *The Cell Count*—Normally the spinal fluid may contain a few lymphocytes, up to as many as seven or eight per cubic millimeter as the probable normal maximum, counted with the Thoma blood-counting chamber. An appreciable increase in this number is strongly suggestive of neurosyphilis or tuberculous meningitis. The test should be made with freshly drawn spinal fluid, and any physician with a microscope and a counting chamber can easily learn to do it.

2. *The Globulin Test*—In testing for globulin, normal spinal fluid remains clear or may become faintly opalescent, while with a pathologic amount of globulin present, as occurs in menigeal inflammations and in various types of neurosyphilis, the test shows a distinct cloudiness or a flocculent precipitate. Noguchi's butyric acid, the Norne-Appelt, or other tests may be used. This is a simple chemical test which any one can perform.

3. *The Colloidal Gold Test*—This test consists of a series of color changes in graded dilutions of spinal fluid when mixed with the colloidal gold solution. The color

variation in the test tubes, when the test is positive, gives, when charted, one of several "curves," the two more important being the "paretic curve," always present in paresis and taboparesis in untreated cases, and the "luetic curve," which excludes paresis and is indicative of tabes or cerebrospinal syphilis. The reagent can be purchased ready made, and the test is fairly simple.

4. *The Wassermann Test*—Not all cases of neurosyphilis give a positive Wassermann reaction with the spinal fluid, but, when present, it proves the existence of neurosyphilis. Such reaction, however, does not at all indicate the degree of activity of the infection.

The blood serum may be positive and the spinal fluid negative, but still the patient may have some form of neurosyphilis. Both blood serum and spinal fluid may give a negative Wassermann, and yet again may the patient be affected with a syphilitic involvement of the central nervous system. Both spinal fluid and blood may be positive thus showing a combined neural and associated involvement. The Wassermann reaction of the blood bears little or no relation to the reaction of the spinal fluid, this condition being due to the neural origin of the "antibodies" of the spinal fluid.

These four tests of the spinal fluid—the cell count, the globulin test, the colloidal gold test, and the Wassermann test—are of great value and importance from both diagnostic and prognostic standpoints.

Now, let us return to the various types of neurosyphilis with their various spinal fluid findings.

1. *The following types of clinical neurosyphilis* show negative spinal fluid findings:

(1) Vascular neurosyphilis,—the purely vascular form, only the blood vessels of the central nervous system being affected, in such conditions as thrombosis, hemor-

rhage, cerebral aneurism, and endarteritis obliterans.

(2) Tabes,—incipient, treated, "abortive," and late degenerative forms.

(3) Cerebral gamma.

(4) Syphilitic cerebral nerve paralysis, due to syphilitic meningitis.

(5) Syphilitic spastic paraplegia.

(6) Syphilitic epilepsy.

(7) Syphilitic psychosis, of the non-tabetic and non-paretic type, such as syphilitic paranoia or syphilitic dementia.

The spinal fluid findings in these types are usually negative, or essentially so, with all of the four tests above mentioned. However, in cerebrospinal syphilis with co-existing vascular and actual neural involvement the spinal fluid may be negative, may show only an increase in cells and globulin, or may be positive with all four tests. Again, in intermediate stages of tabes there are often cases with mildly positive spinal fluid findings.

It is claimed that some of these cases with negative findings afterward develop positive findings, and, on the other hand, that some cases with positive findings show a spontaneous disappearance of symptoms and a return of the spinal fluid to normal. It is interesting to note that laboratory evidence of active neurosyphilis with negative spinal fluid findings may often be obtained by a provocative injection of arsenphenamin, following which the spinal fluid may show a positive Wassermann, an abnormal cell count and globulin content, and a typical gold curve,—any or all of these.

2. *The following types of neurosyphilis*, with signs and symptoms of central nervous involvement, often give positive spinal fluid findings:

(1) Tabes,—except in incipient, treated, "abortive," and late degenerative forms, as previously noted.

(2) Taboparesis.

(3) Paresis.

Each of these usually shows an increased cell count, an increased globulin content, and a positive spinal fluid Wassermann, while with the colloidal gold test tabes gives a "luetie curve," thus excluding paresis, and taboparesis give a "paretic curve," thus excluding tabes and so-called cerebrospinal syphilis. It must be noted, though, that the "paretic curve" is sometimes found in meningovascular syphilis and in some forms of early neurosyphilis. The spinal fluid in these three types frequently gives results with all four of the tests described, sometimes with only one or two or three, and sometimes again it is either mildly positive, or, rarely, even negative throughout.

3. *A third group* of cases of neurosyphilis, without any clinical signs or symptoms of central nervous system involvement, shows positive spinal fluid tests.

In such cases the spinal fluid is doubtless persistently positive, perhaps for many years prior to the development of neurosyphilitic symptoms. It is believed that the central nervous system is very frequently involved by an active syphilitic process during the early period of generalization, and consequently the absence of clinical signs and symptoms does not at all exclude syphilitic infection of the central nervous system. However long the period may be, whether ten, twenty, or thirty years, from the early involvement of the central nervous system to the final appearance of clinical symptoms, it is the general consensus of opinion that the spinal fluid changes precede by many years the appearance of subjective and objective symptoms of neurosyphilis.

Inasmuch as probably 25 to 30 per cent. of all cases of secondary syphilis sooner or later develop infection of the central nervous system under the inadequate examination and treatment that are unfortunately and inexcusably too general, and in view of the fact that examination of the spinal fluid may often show, even in the early stages of syphilis, a beginning neuro-

syphilitic process in the absence of clinical signs and symptoms, it is of the greatest importance that the physician should regard every syphilitic, no matter how early the stage, as a potential case of neurosyphilis.

Not only in cases of suspected clinical involvement of the central nervous system, be the blood reaction negative or positive, should the spinal fluid be tested out thoroughly, but, in addition, in all cases of primary or secondary syphilis a lumbar puncture should be made and the spinal fluid properly examined, at least after the end of the second thorough course of anti-syphilitic treatment, about six months after the infection, or earlier, if indicated. In tertiary cases, without signs and symptoms of neural involvement, this may be deferred until after the administration of complete thorough treatment, but in no case should any syphilitic patient be discharged as cured without the information gained by lumbar puncture. When the spinal fluid is positive it should be re-examined yearly, and when it remains negative for a period of one year examination every two years will then suffice.

Without belittling whatever the extreme importance of the spinal fluid tests in syphilis, it is of even greater importance that a thorough neurologic examination of the patient be made from time to time for the detection of any abnormalities of the nervous system, that thorough examinations of the eyes be made for the detection of any pupillary, eyeground, or other ocular abnormalities, and that repeated examinations of the patient be made for the detection of any cardiovascular changes, by means of all of which the physician may often obtain an early clue to the possible involvement of the central nervous system.

It is only by such careful, thorough analytical and clinical means of detection that the physician, forewarned as to the neural condition and forearmed as to the proper treatment, can hope to steer his patient clear of neurosyphilitic pitfalls.

TUBERCULOSIS AS A PUBLIC HEALTH PROBLEM IN THE SOUTH

By E. Paul Knotts, M. D., County Health Officer, Newberry, S. C.

The medical and public health problem of the south is that one concerned with tuberculosis. It is amazing to review the results of work against tuberculosis in the northern and Eastern States and to observe how efficiently and systematically the work is carried on. Yet the care of the tuberculous victim in the congested tenement district is most difficult even for the most efficient organization. In the South there exists just as grievous problem in the negro because of his temperament and habits. With so large a proportion of its population living in an unsanitary manner and who are coincidentally peculiarly susceptible to tuberculosis, the south may be regarded as the frontier of the fight on tuberculosis.

The south has done great things along these lines but it has been largely personal. As a result it is only the white population that has reaped any benefit and if we are to believe the statistics that benefit has been offset by some other factor. It would seem reasonable to suppose that this undetermined factor may be accounted for by the fact that the medical profession and the public health agencies have not properly attacked the negro problem with relation to tuberculosis. The reasons for this are many. The negro is inherently a poor subject to inculcate the principles of good living. He is content to live in a squalid shack, surrounded by an ample family, his home musty and unkept, doors and windows closed, cleanliness of little concern. This is true of personal hygiene also. The rations most often is unbalanced. These are some of the reasons why tuberculosis exists

among the negro people and why it will continue for some time.

Yet the life of the negro is intimately interwoven with the life of the white people. As domestic they become virtually members of the family, as cook, maid and laundress. As nurses they enjoy a companionship with the child that is second only to the mother. When stricken with tuberculosis it requires no keen imagination to comprehend the situation which exists. The patient is not forsaken by his church members or fellow "lodge" members. On the contrary all come to visit him and tarry long in this duty, giving full possibility for the spread of contagion. And this is the outstanding feature of the hard problem to be solved. The negro will not admit long of restraint or isolation. At home it is almost impossible to have him exercise the necessary precautions and he is fearful of going to the sanitarium and will not remain there long enough when he does go. Here in South Carolina we have had sanitarium space for negroes for only a short time and it has not had time to make any impression on our negro tuberculous population. I tell you that any plan to eradicate tuberculosis that fails to include the negro in its plans is doomed to failure in the south.

Because of its widespread prevalence and often its apparent hopelessness tuberculosis has long been the forte of the fakir in medicine. The human organism has in its makeup that quality of optimism that never gives up. The fargone consumptive spitting his life away, comes to his doctor who woefully wags his head and truthfully tells him that his days are numbered. It is surprising the recuperative powers of apparently dying consumptives. So startling is this phenomenon sometimes as to make the practitioner doubtful as to the accuracy of his bad prognosis. Usually the outcome is little affected by these remissions. However should one of these remissions occur coincident to treatment by some fakir we

will see a miraculous turn of groups of people away from their doctor to this person. Perhaps it may be Peruna or Scott's Emulsion in which case the local drug store may have a run on their stores in these commodities. This is a condition which will continue to make millionaires of patent medicine manufacturers and allow the various quacks to continue to exploit the public for personal gain. It is well known to you all that, before death has intervened the average patient who suffers from tuberculosis will have consumed several carloads of tonics, stimulants, pills and dopes and what not. When all else fails, if there is a spine adjuster or faith healer convenient, these are consulted and their respective arts invoked.

That these agencies do provoke much hardship on those patients sick with tuberculosis is most certainly true, for they destroy the confidence of the patient in his physician, they teach him that his disease is not microbic and they delay if not totally prevent the institution of the correct treatment. Then in my opinion the second step in the eradication of tuberculosis is the defeated quackery and the breaking down of the patient medicine industry.

Slater² insists that childhood is the time when tuberculosis infection occurs and 10% of those infected will develop clinical tuberculosis. Koffler³ in his report of his investigation to discover the extent in which members of families in which tuberculosis is present become infected states: A patient expectorating tubercle bacilli in large quantities will infect all the children in the family except those over one year of age who will often show no reaction in spite of every opportunity to become infected. Viton⁴ concurs in this and he thinks that occult, dormant and masked infection with tuberculosis is frequent in children and that most infections in adults is a flaring up of the infection acquired in childhood. Schram⁵ found from 53.1 to 80% giving a positive tuberculin reaction of

500 children under 9 years of age in homes where there was some tuberculous inmate. Among 168 children in homes in which tuberculosis seemed to be particularly contagious positive reactions were obtained in from 67.5 to 100% in all over 5 years of age. The experiences related demonstrate that it is impossible to preserve young children from the contagion when some member of the family has tuberculosis without greater education, and isolation. Taylors and Moorman state that the routine history taking in their cases of tuberculosis show childhood exposure in 62% of 200 adult cases. This preponderance of childhood exposure in connection with adult cases strongly suggests re-infection from within, rather than from without. Baldwin and Gardner state that the vast majority who are destined to develop tuberculosis after they are 21 years of age have acquired it as infants or in childhood. In this there is concurrence of practically all the recent observers of this disease, Montes⁸, Baldwin⁹, Ickert¹⁰, Oddenberg¹¹, Kock¹² and Mollers¹³. Baldwin⁹ says that he believes that there may be periods of mild tubercle toxemia between the date of infection and the development of clinical signs and that many cases of mal-nutrition, malaria, anemia, undertermined fever etc., may result from this toxemia.

Then were it possible to discover these potentially diseased cases, who may or may not break down later, there would be only a small percentage of tuberculous victims unaccounted for. After having done what can be done to prevent the infection then our efforts must be directed towards the attempt to limit the degree of infection. A mild degree of infection seems to exert some beneficent effect as well as endangering the life of the person. Experiments done on guinea pigs at Saranac Lake⁷ hospitals indicate that an exposure with tuberculosis bacilli of low virulence produces considerable immunity. In actual life this experience is borne out to some degree.

Statistics of conjugal tuberculosis show that it is uncommon. The Trudeau Sanitarium point out the fact that among the healthy employees there numbering into the hundreds, only one has ever developed clinical tuberculosis. These experiences indicate that a re-infection from without or of exogenous origin is unlikely to occur unless the bacilli are in unusual numbers. The experiments done on the guinea pigs as noted before showed further that under a poor diet and by fatiguing an apparently convalescent animal would develop tuberculosis and die. This has been shown in a large way in Germany. Ickert¹⁰ states that the mortality of young children increased 100%; school children less than 50%; older persons the increase was 200%. The infants suffered from the fact that their mothers had to become wage earners and the youths from becoming wage earners themselves. Fully 62% of the youths and older persons were known to have a familial taint. This not an increase of chances of infection but is the same course that

has developed in all the countries where undernourishment has come to pass as a national catastrophe. Oldenberg relates that in a long series of cases that children who develop clinical pulmonary tuberculosis that it is more apt to recur during an intercurrent infection, lapse of hygienic living, and to poor diet. Relapses become more and more difficult to control.

With these established facts before us the third and most important step in the eradication of tuberculosis becomes apparent. Every child coming from a home where a case of tuberculosis exists must be regarded as potentially a consumptive and its health guarded in such a way that it will be able to overcome the infection. Every child suffering from malnutrition or undertermined fever must be regarded in the same category. Until the family physicians take these things seriously and take to themselves the responsibility of treating these children and by examining them often little will be done to prevent the infections from becoming clinical cases.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

Keyser, Linwood D.: *The Mechanism of the Formation of Urinary Calculi. Annals of Surgery, Vol. 77, No. 2, February 1923, Page No. 210.*

This paper represents an experimental study of the etiology of urinary calculi. The writer mentions the various constituents of urinary stones which are uric acid, urates, calcium oxalate, calcium phosphate, calcium carbonate, ammonium magnesium phosphate, and less often, cystin or xanthin. All are insoluble in water, even within the range of acidity or alkalinity which we find in urine. While these substances are

found in the urine of normal persons, the problem of discussion by the writer is why there is a fusion and a typical deposition into a stony concrement, instead of their remaining isolated, single, and unfused and perfectly formed.

He states that the power of the urine in health to hold these constituents of calculi in solution, or to bring about their reposition as isolated entities, is due to the presence of finely divided particles of organic matter, the so-called protective colloids. The urinary colloids are incompletely known, but are supposed to include the urinary pigments, traces of nuclealbumin,

tors in maintaining urinary solutions. mucin, and albuminous material from effete cells cast off from the renal parenchyma. The reaction of the urine and the body temperature are also important factors.

As quoted by the writer, Ebstein and Nicolaier, in 1891, studied the chemical nature of urinary calculi and for the first time produced stones in the urinary tract of animals by feeding oxamid, a derivative of oxalic acid.

Rainey, in 1856, and later Ord and Shattock, determined the physical principle that colloidal matter *in vitro* would modify crystalline morphology.

The writer further states, "During the past two years the experimental production of calculi has been studied by the feeding of oxamid. The details of this study are published in another report, but in brief the results were as follows: Synthetic oxamid on being fed to rabbits and dogs was found to be excreted as such, in the urinary tract. On being deposited from the urine it assumed an entirely different crystalline morphology from that of the synthetic product fed. The crystals had changed from a non-fusing to a fusing or coalescent variety, this fusion of crystals leading to stone formation. The process seemed to be related to the urinary colloids as the reaction of the urine did not interfere with the process and as the synthetic oxamid crystals, when dissolved by heating in animal urine, would be reprecipitated on cooling with a morphologic change to the fusing spheroidal crystalline types."

"These experiments suggested that stone formation might be due to one of several factors: (1) The excretion of an excessive quantity of crystalline material beyond the power of the urinary colloids to maintain either solution or deposition of isolated non-coalescent crystals; (2) a deficient amount of protective colloid in the urine, and (3) the precipitation of normal

colloids or masking of their protective activity by bacterial exudates, or by foreign colloidal matter excreted as the result of an abnormal metabolism."

In the experimental production of an excessive crystalline excretion, Keyser used normal butyl oxalate subcutaneously. In this manner he produced urinary calculi, composed of calcium oxalate. The deposits were in the lumen of the tubules and none within the glomerulus or its capsule or in the proxima convoluted tubules. The calcium oxalate crystals, in order to form stones, changed from a non-fusing to a fusing or coalescent type.

The writer states, "We may assume that, by enormously increasing the quantity of the crystalloidal calcium oxalate in the urine, we overwhelm the protective colloids of the urine which were present only in amount sufficient to maintain the solution of crystalline isolation of the quantity of oxalate excreted passed the limit of that capable of being handled by the urinary colloidal machinery, then fusion of crystals and calculus formation took place."

In his experimental efforts to show the possibility of stone formation from a deficiency of urinary protective colloids, the writer has had no success. He states, however, that "Lichtwitz has demonstrated that the removal of colloidal matter from urine *in vitro*, either by extraction with ether or benzene, or by dialysis, uniformly in a precipitation of phosphates or of calcium oxalate. Furthermore, Schade of Kiel, in 1909, produced stony masses *in vitro* by clotting fibrinogen in the presence of freshly precipitated phosphates, oxalates, and carbonates, thus giving tremendous impetus to the significance of colloidal factors in stone formation.

In his experimental work of producing lithiasis from bacterial exudates, the writer has had much success. He has found that oxalated crystals would change to the spheroidal coalescent variety by direct in-

fection of the kidney. He states, "Rosenow and Meisser, working with streptococci from the urine of patients with multiple recurrent calculi, have repeatedly produced calculi in the kidneys of dogs by the methods of specific bacteriology. These strep-

tococci were implanted in devitalized teeth of dogs which developed urinary calculi consistently after an interval of several months." He thinks that infection interferes with the normal colloidal balance of the urine, thus affecting its solvent power.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

THE CANCER PROBLEM

During the year of 1922, approximately 80,000 people died in the United States of cancer. That is twice the total number of lives lost by our army and navy combined during their recent two years participation in the European War.

The great problem in cancer today is to find the cause.

Cancer has been defined as an unlimited and unrestricted overgrowth of cells. Repeated mild irritation is unquestionably a factor in its etiology and a chronic inflammatory condition often passes into a malignant disease.

Until the etiology has been settled, cancer will continue to run rampant through the civilized lands unless the people are taught that their only salvation lies in the early recognition of this dreadful scourge.

Every crack, fissure, ulcer, sore or tumor which does not heal rapidly under simple medical care is potentially malignant.

Cancer is more frequent in the cavities of the body where an acid medium exists than where an alkaline one is present. Thus it is that cancer is seen 98 times in the acid large bowel to 2 times in the alkaline small bowel.

Many cases of cancer are preventable. Especially is this true of superficial cancer. Necrotic tooth roots, the sharp edge of a tooth cavity, ill fitting plates, excessive

and prolonged smoking, luetic leukoplasia of the tongue frequently cause cancer in the buccal cavity and the removal of these and similar offending agents will almost in themselves wipe out cancer in the oral cavity.

McCarthy states that he has never seen a cancer in the breast sections of which did not reveal the presence of chronic cystic mastitis. This condition is essentially a chronic inflammatory lesion, is easily removed, and is unquestionably precancerous in its nature.

The family physician should insist that all his female patients, aged 35 or more, especially those who have borne and nursed children should have a uterine and breast examination at least three times every year.

Out of the last 52 consecutive cases of uterine and breast carcinoma seen by ourselves, none of the uterine cases was operable, so far advanced was the lesion. Surgery has practically been discontinued for uterine cancer. These cases are best treated by radium and deep Roentgen Therapy.

But little can be further expected from surgery, as regards longevity in cancer. The only alternative is to find a "specific", and that apparently being as far away now as it was 40 or more years ago, the only remaining way by which the mortality can be lessened, and human life and happiness ex-

tended, when threatened with this terrible thing, is to get the patients earlier than here-to-fore, and preferably to get them

before the lesion itself has become malignant.

PUBLIC HEALTH

LEON BANOV, M. D.,
Health Officer, Charleston County,
Charleston, S. C.

THE DRUGLESS HEALER

The development of medicine like the development of all sciences, has always paralleled the general progress of mankind.

When humanity was steeped in ignorance and superstition, the physician of that belighted day practiced medicine according to the demonic theory—his problem was to exorcize the offending demons in order to affect a cure for his patient; and the potato carried about in the pocket and the amulet of assafoetida and camphor worn by the superstitious of today, remind one that along with our rich heritage of learning which has been handed down to us from past generations, we have also received a modicum of superstition and a goodly portion of gullibility.

This perhaps explains why Elisha Perkins, when he proclaimed to the world a century ago, that he could cure all the ills that man is heir to, merely rubbing the sick one with his "tractor", acquired affluence and world wide fame as the inventor of an instrument intended to banish sickness from the face of the earth.

This will also probably explain the sale of thousands upon thousands of electric Belts for the alleviation of human suffering less than a quarter of a century ago; and the man who fails to recall the highly polished tin can which brought a price ranging from \$25.00 to \$100.00 per can under the guise of "oxydonor" or other high

sounding pseudo scientific name is in need of a memory training course.

Of course everything has its fads and fashions, and the tractor is a forgotten incident, while the electric belt and the "oxydonor" are entirely out of style today. Human gullibility is just as keen today however, as it was ten centuries ago, and the trickster and the charlatan is just as popular as he was a thousand years ago. Methods may change with the years, tricks may put on new garments to conform with the times, but the harpy who fattens on the hopes of suffering mankind is of the same indential type that grew wealthy in the centuries gone by through the sale of charms and amulets when entire cities died of cholera and bubonic plague.

The center of the stage seems to be occupied at the present time by the "drugless healer." This non-medical practitioner of medicine offers to cure all ills either by thumping your spinal column or by shooting so many ohms of electronic energy (whatever that may mean) at you, or by making you repeat a certain formula over and over again until the desired effect has been produced—namely, the payment of a fee.

It is said that a bow-legged man hesitated about taking the Coue treatment for fear that an overdose might make him knock-kneed.

We have no such fears on the matter. Nor are we concerned with the fact that in adjusting the spine or suggesting to the

subconscious, these so-called healers manage at the same time to make satisfactory adjustments of the patient's purse string.

We are concerned however, by the thought that these chiropractors, naturopaths and other what nots who try to treat diseases without even attempting to make a diagnosis; and who perhaps can do very little harm to a person who is not very ill, can do irreparable mischief to a patient suffering from an organic complaint, or from a condition requiring prompt medical treatment by delaying proper treatment and

thereby endangering perhaps, the patient's chances of recovery.

Suggestive therapeutics have been used for a number of years by the medical profession; and there is no doubt but that an imaginary ailment will often yield to an imaginary remedy; but the practice of medicine should be left to those only who through proper study of anatomy, physiology, chemistry and the other essential subdivisions of the science of medicine, have become fitted for the proper diagnosis and treatment of diseases.

SOCIETY REPORTS

GREENVILLE COUNTY

Greenville County Medical Society held an interesting meeting March 5th, Dr. T. R. W. Wilson, Pres. in the chair.

Sixteen answered to roll call. There are seventy-four members of this society.

Dr. J. L. Sanders read a paper on "Paranasal Sinus Infection." Discussion of Dr. Sanders' paper was lead by Dr. L. O. Mauldin.

Interesting case reports were made by Drs. T. R. W. Wilson, J. M. Fewell, A. E. Brown, and J. L. Sanders.

The attendance was unusually small, due to the presence of other attractions in the city that night, but an inspiring service was held for the few by Dr. R. E. Truesdale, pastor of the M. E. Church.

It was announced that the 1924 meeting of the Tri-State Medical Society would be held in Greenville. Action was taken whereby no local man will offer a paper on the program, this being done to prevent a local monopoly so far as the program is concerned.

Officers of this society for the year 1923 are: President, Dr. T. R. W. Wilson, Vice-President, Dr. C. C. Ariail, Secretary.

Dr. J. D. Guess, Treasurer, Dr. E. W. Carpenter.

Delegates to the annual meeting in Charleston: Drs. A. E. Brown, W. C. Black, T. M. Davis, C. H. Fair.

NEWBERRY COUNTY

The Newberry County Medical Society met February 9th, 1923. Dr. J. M. Kibler, Pres. in charge.

Minutes of last meeting read and approved.

Ten members answered roll call.

Dr. J. H. Moore, of the Loomis Sanitarium, New York, sent his dues, and news of decided improvement in health.

Dr. Knotts of the Newberry County Health Unit, read a fine paper on tuberculosis as a public health problem. He also reported thirty-six deaths due to tuberculosis, seven white and twenty-nine colored, for Newberry county during 1922. This does not include the city of Newberry health record.

J. K. Wicker, M. D., Sec.

PICKENS COUNTY

The Pickens County Medical Society held its regular monthly meeting on March

7th, eleven members being present.

Number of names on roll are twenty-three.

Dr. L. G. Clayton, president of the society, called the meeting to order.

There were no papers read but a number of case reports presented. One, "Congenital Syphilis," by Dr. P. E. Woodruff, was instructive: Also, a case of hemorrhage, first apparently from the stomach, and later from the bowel, by Dr. W. B. Furman.

Dr. L. O. Mauldin, District Councilor, was present, and besides well chosen remarks for the good of our society and the profession generally, told us some new things to do for ear trouble.

Dr. C. P. Corn, of Greenville, was also present and talked to us about the use of the cystoscope.

Officers for the present year are as follows:

Dr. L. G. Clayton, President, Dr. F. L. Webb, Vice-president, Dr. J. S. Bolt, Secretary, and Treasurer.

Delegates to the annual meeting in Charleston: Drs. J. L. Valley, W. A. Tripp.

ORANGEBURG COUNTY

The Orangeburg County Medical Society held it's regular monthly meeting in Orangeburg, February 8th, 1923.

Fifteen doctors answered to roll call, and two visitors were at this meeting.

The program was as follows:

Lobar Pneumonia, by Dr. G. H. Walter. This paper was freely discussed by Drs. L. C. Shecut, W. C. Myers, H. P. Moore, and Kenneth Lowman, of the U. S. Navy.

Dr. G. M. Smith, the county veterinarian, read a very interesting paper on the development of veterinary science, and the work up to date.

Surgeon Kenneth Lowman, U. S. N. gave a graphic discription of his recent visit to the West Indies, Panama, and Japan.

He also told of the methods used in the Navy for preventing disease.

After the meeting a dinner was served at the Orangeburg Hotel.

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THE COST OF WORK—IN CALORIES

Now and then it falls to the professional duty of the physician either to prescribe some form of work for his patients or to consider the possible suitability of the tasks in which they are customarily engaged. Thus, there is added to the many requirements for acceptable medical practice the duty of becoming an expert on the subject of both muscular and mental effort. Exercise must be prescribed for some persons; others must be prevented from engaging in over strenuous occupation. Personal experience becomes a helpful teacher in enabling us to pass judgment on various degrees or types of exercise; and now science is coming to our further assistance. The study of energetics bears out experience in telling us that lumbering is a calory-consuming occupation in which the daily need of food fuel may rise to 6,000 calories. Hence, Lusk is moved to remark that the prover-

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bial reputation of sawing wood as a strenuous occupation has here its scientific verification, and explains the disinclination of the hungry to engage in this useful occupation, as well as the unpopularity of charitable wood yards. The wood yard and the stone pile are more likely to be involved in a sentence to jail than in a physician's directions. The easier tasks that permit suitable function without overtaxing an impaired heart or some other organ are usually expressed in medical literature in terms of dumb-bells or Indian clubs or stairclimbing. Most considerations of this sort have involved the male sex and its vocations. Of late, new data have accumulated with respect to the energy expenditure of women in household occupations. The figures for rest approximate 60 calories or, in round numbers, a calory per kilogram, hourly. Such work as sewing requires the additional expenditure of from 10 to 15 per cent. of energy; for dishwashing or ironing the increment mounts to 20 per cent. or more, while the rapidly vanishing vocation of sweeping may make an extra energy demand of 65 per cent. an hour. According to the information issued from the Office of Home Economics at Washington, it appears that knitting, crocheting, darning and sewing by hand make moderate demands on the body as regards energy expended, compared with washing, ironing, sweeping and dishwashing. This does not take into account such matters as fatigue from sitting in one position, from monotony of work, or similar factors, but simply the energy expenditure for the work done. Here is a liberal range of choice of therapeutic tasks

for women. And lest the list should seem to be too conservative, let us add that the work of typewriting, according to Carpenter, belongs in the dishwashing group of muscular exertions. —*Jour. A. M. A.*, Jan. 20, 1923.

LUNG VOLUMES IN CERTAIN HEART LESIONS

The ordinary sequence of events in heart patients with lung involvement, according to the findings of Christen Lundsgaard, New York (*Journal A. M. A.*, Jan. 20, 1923), and his interpretations, is as follows: In the very first stage of a (mitral) lesion in which the main clinical symptoms are the accentuated pulmonic second, the concentric hypertrophy of the heart and the murmurs, the only abnormality found may be an increased residual air. In the course of time when the stasis lasts long enough, the total volume begins to decrease, owing to the increasing influence of the previously mentioned factors. The residual air may, however, still be increased. At last a period of broken compensation occurs, with further decrease in the total capacity. In this period, however, the residual air is diminished, often to a considerable degree. From this it appears natural that the vital capacity in heart patients cannot in the course of effective treatment increase to its normal value. Even if the total capacity becomes normal, the residual air remains increased on account of the increased pressure in the pulmonic circulation necessary for the establishment of compensation. The vital capacity, therefore, must remain somewhat diminished.



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STANDARDIZATION OF PITUITARY EXTRACTS

THAT the physician may have at command a reliable pituitary extract, it is essential that it be carefully standardized. The standardization of Pituitrin is based on the fact that solutions containing the active agent act on unstriated muscle, such as that of the uterus and the arteries, to cause typical contractions.

The reaction is directly proportional to the content of active agent and can be measured by the use of appropriate apparatus and animals.

The action on the uterus, known as the Oxytocic test, is applied to a strip of uterine muscle from a properly selected guinea-pig, the test strip being suspended in warm oxygenated Locke's solution to which the Pituitrin is added. The muscle contracts more or less in proportion to the amount of active agent present and by means of a lever records the degree of activity on a revolving drum.

The action on the arteries is determined indirectly by the rise in blood pressure following intravenous administration and is known as the Pressor test. It is carried out on anesthetized dogs. The effect on the blood pressure is recorded directly from the carotid artery. This is the more accurate and in some respects the more difficult test of the two.

In the performance of these tests special skill and experience are requir-

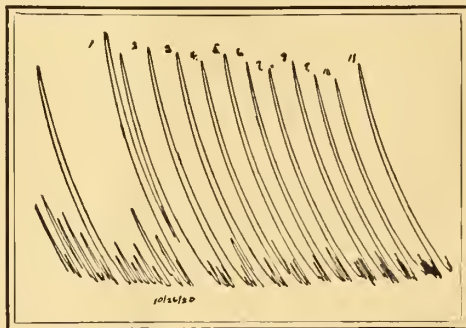
ed to avoid errors that would vitiate the results. In the Oxytocic test, for example, uteri from several animals may have to be tried before one suitable for the purpose is found. Excessive irritability due to congestion and inflammation of the musculature renders

the specimen unfit for use. Likewise to be rejected are those muscle strips that fail to register equal contractions from like doses of a standard extract. And in every case both standard and test samples of Pituitrin must be sufficiently dilute to obviate the occurrence of the maximum contraction

of which the muscle strip is capable, since such an effect would leave the operator in doubt as to the exact degree of activity of the specimen under test.

From these facts it may be appreciated that many difficulties are encountered in the physiologic standardization of pituitary extracts. It is therefore not surprising that there is such a lack of uniformity in the activity of commercial preparations.

Owing to the fact that all pituitary preparations in liquid form deteriorate with age, and in order that the standardization of Pituitrin may be of greatest value to the physician, a date is placed on each package after which the contents should not be used unless due allowance is made for a probable loss of activity.



Tracing illustrating a series of tests of Pituitrin by the Oxytocic or Isolated Uterus Method. No. 1 is a maximal contraction. Nos. 9 and 10 are equivalent submaximal reactions of sample and standard respectively.

PARKE, DAVIS & COMPANY

The Journal

OF THE

South Carolina Medical Association

VOL. XIX.

GREENVILLE, S. C., APRIL, 1923

NO. 5

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CONTENTS

EDITORIAL DEPARTMENT:

Medical College of the State of South Carolina.....	451
Dr. Braasch, Chief of the Section of the Mayo Clinic Contributes Editorial to Dr. Weinberg's Dept.....	452
The Charleston of Today	452
The First Meeting of the South Carolina Medical Association, Charleston, S. C., Feb. 14, 1848.....	454
Tentative Program of the South Carolina Public Health Association	455
Alumni Luncheon Medical College, State of South Carolina	458
Woman's Auxiliary to Organize	458
Historic Notes of Interest About the South Carolina Medical Association	458

(Contents continued on page ii.)

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ORIGINAL ARTICLES:

The Value of Hospital Standardization to the Medical Profession by F. M. Routh, M. D., Columbia, S. C.	460
Clinical Results Following One Thousand Non-Surgical Drainages of Pathologic Gall-Bladders by George M. Niles, M. D., Atlanta, Ga.	463
The Leucocyte Count in Diagnosis and Prognosis of Appendicitis by H. W. Rice, M. D., Columbia, S. C.	467
SURGERY DEPARTMENT	470
DERMATOLOGY AND SYPHILOLOGY DEPARTMENT	471
PUBLIC HEALTH DEPARTMENT	472
UROLOGY DEPARTMENT	473
SOCIETY REPORTS	475
ABSTRACTS	477
CORRESPONDENCE	478

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The Journal

OF THE

South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

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EDITORIAL

MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA

The Medical College of the State of South Carolina is one of the oldest medical colleges in the country, having been organized in 1823 as the Medical College of South Carolina, and later chartered in 1832 as the Medical College of the State of South Carolina. Its scope and usefulness were further enlarged in 1881 by an amendment to the charter providing for the creation of the School of Pharmacy; and in 1913, by Act of the General Assembly, the college passed under the ownership and control of the State thus becoming a State college in fact as well as in name. In 1919 on account of the increasing importance of the training of nurses and because it was realized that this training could be given more efficiently under the direc-

tion of an organized medical faculty and affiliated hospital, the School of Nursing was created.

The early faculty of the college included men of national and international reputation and the brilliant attainments and reputation of its faculty attracted a large body of students from various sections of the country. From its organization the faculty have had in view the growing and changing requirements of medicine and have been among the first to provide additional instruction to meet these demands. It was one of the first of Southern colleges to adopt a three year course of study, and later to require a four year course. It also took an advanced stand in adopting the higher entrance requirements now in force.

The work so eminently carried out by its distinguished founders has been continued

by the present faculty and assistants, and the laboratories and clinical instruction have kept pace with the exacting demands of modern medical teaching. There are sixty-five professors and instructors engaged in the teaching of the various branches, thirteen of whom devote their entire time to college work. Among this number are graduates from various college representing a number of States and men of wide reputation and broad scientific attainments. This breadth of training and variety of service and experience insure a comprehensive view point of the field of modern medicine, pharmacy and nursing, and a knowledge of the methods of instruction employed in the leading medical and pharmaceutical centers of teaching and research.

The material growth of the college during its first decade as a state institution has been most gratifying. In the session of 1918-19, seventy-three students were enrolled in the schools of medicine and pharmacy. In the present session one hundred and ninety students are enrolled in these two schools and eighty-seven in the school of nursing, making a total enrollment of two hundred and seventy-seven. This increase in the size of the student body has caused a serious congestion which can be relieved only by additional buildings, or by adding to the present structures. It is probable that steps will be taken to relieve this situation in another year. This college has become an integral part of the educational system of the State and its maintenance and development form an essential part of the educational policy of the General Assembly.

The meeting of the Alumni Association of the Medical College will be held on Wednesday the 18th from 1 to 3 p. m. The place of meeting will be announced later. Matters of importance to the college will be discussed and a large attendance is desired. Luncheon will be served, the cost of which will be \$1.00 a plate. All members expecting to attend are requested

to notify the Registrar or the Dean as soon as possible. Alumni are urged to arrange class reunions at some time during the session to keep alive the spirit of comradeship by the renewal of old associations and common memories.

Robert Wilson Jr., M. D., Dean.

DR. BRAASCH, CHIEF OF THE SECTION OF THE MAYO CLINIC,
CONTRIBUTES EDITORIAL
TO DR. WEINBERG'S
DEPARTMENT

Following the policy of the Journal for the past year, we are privileged to publish in this issue a valuable contribution from one of America's most distinguished Urologists.

The article is pre-eminently practical for the general practitioner.

THE CHARLESTON OF TODAY

To describe Charleston to the physicians of South Carolina is to a very large degree a superfluous proceeding, since there are very few members of the profession in the State who have not at one time or another gone through the initiation of drinking Goose Creek water that is said to make one a Charlestonian for life. There are few of them who do not know that the metropolis and seaport of South Carolina is a city unique in many respects among the cities of the United States, combining with the modern spirit a charm and background inherited from olden days. Unfortunately, however, there are many who have not had opportunities for visiting the city in a number of years and for them and for those who, for some reason, are altogether unacquainted with the 1923 convention city of the association, it may be worth while to mention some of the things that go to make up modern Charleston.

Materially speaking, Charleston is primarily a seaport and is at present and for

some years past been devoting its major energies to developing its water commerce. It now owns its waterfront facilities, which are controlled by a commission of State-wide membership and Charleston is now and desires to be known by every South Carolinian as South Carolina's port. It has unquestionably the finest harbor on the entire South Atlantic and one of the finest in the world and nature has endowed it with all the qualifications for becoming a great depot of trade. Besides the municipally owned waterfront facilities, of which much is expected by the community, the port has the magnificent terminals built by the United States government at North Charleston at a cost of many millions of dollars, occupying three and a half acres on which are fireproof warehouses that hold 18,000 carloads of merchandise, besides vast sheds and spaces for open storage. These terminals have been pronounced by eminent authorities to be among the world's finest.

Adjuncts of the port include also excellent coaling equipment, used for both bunkering vessels and exporting fuel to foreign countries, the latter trade having grown to large proportions; the extensive oil refinery of the Standard Oil Company, with a capacity of 10,000 barrels of crude oil daily, the plant covering many acres and costing millions; a floating dry dock that accommodates ships of large size, and virtually all the other things that go to make a port of the first class. Special mention should be made, of course, of the Charleston Navy Yard, one of the important units of America's great naval establishment. Charleston's foreign trade is growing by leaps and bounds and all interests are co-operating to develop it.

Industriously, Charleston has made considerable progress in recent years. It has in the General Asbestos & Rubber Company's plant at North Charleston one of the country's largest industries of this class. It has long been noted as a center for the

import and manufacture of commercial fertilizers. Its lumber plants are numerous and large. It has miscellaneous industries employing thousands and producing many millions of dollars' worth of products annually. Its retail and wholesale business establishments have long been noted throughout the State, as have its cotton compresses.

Among the more recent signs of progress in Charleston are two hotel projects of importance. The Francis Marion Hotel, at one of the city's principal street intersections, opposite the former site of the Citadel, is rapidly approaching completion and will be ready for occupation, it is expected, by the end of summer. It is a twelve-story structure costing more than a million dollars, with over 300 rooms, and will be one of the South's finest hostelryes. Work has just begun on the erection of the Fort Sumter Hotel, a large, handsome tourist establishment, on an ideal site on Charleston's famous Battery. When the Francis Marion and the Fort Sumter have been completed, they, with the city's existing hotels, will offer Charleston's guests hotel accommodations second to none in this part of the country.

In educational and cultural institutions Charleston is peculiarly wealthy. The Medical College of South Carolina, the Citadel, the College of Charleston and numerous splendid secondary and elementary schools are found among the former. Charleston has in its museum the oldest institution of the kind in America, founded in 1773. The museum is now planning to entertain the Association of American Museums and to celebrate its 150th anniversary. The Gibbes Memorial Art Gallery has an excellent and growing collection and in the City Hall are to be found some truly famous paintings. Charleston is the home of the poetry Society of South Carolina, an organization which is rapidly making a name throughout the country for its work in fos-

tering the art of poetry and poetic appreciation.

As one of America's older cities, Charleston abounds in historic places and the visitor who has time to visit these shrines of American history will feel amply repaid. There are few streets in the older sections that do not inspire memories of great men and stirring deeds and days.

The visitors to the medical convention will be in the city at a season to enjoy the amazing beauties of Magnolia Gardens, regarded by many competent judges as the most beautiful garden in all the world. Of Magnolia Gardens, John Galsworthy, the noted writer, said a year or two ago: "I specialize in gardens and freely assert that none in the world is so beautiful as this. It consigns the Boboli at Florence, the Cinamon Gardens of Colombo, Conception at Malaga, Versailles, Hampton Court, the Generalife at Granada, and the La Mortala to the category of the 'also ran.' Nothing so free and gracious, so lovely and wistful, nothing so richly colored, yet so ghostlike, exists, planted by the sons of man. It is a kind of paradise which has wandered down, a miraculously enchanted wilderness."

Sidney Rittenberg,

Charleston Chamber of Commerce.

THE FIRST MEETING OF THE SOUTH CAROLINA MEDICAL ASSOCIATION, CHARLESTON, S. C., FEB. 14, 1848.

The Medical Society of South Carolina which had long been in existence in Charleston, issued a call to the physicians of the State to meet for the purpose of organizing a State Association, and a large number responded.

The meeting was held in the Hall of the Apprentices Library Society. On motion of Dr. W. T. Wragg of Charleston, the meeting came to order, and Dr. James Moultrie of Charleston, was called to the chair.

Dr. D. J. C. Cain of Charleston, and Dr. R. B. Johnson of Camden, were appointed secretaries.

A nominating committee was appointed.

This committee nominated for permanent officers:

Dr. James Moultrie, of Charleston, President.

Dr. J. C. Ready, of Edgefield, Dr. Isaac Branch, of Abbeville, Vice-Presidents.

Dr. D. J. C. Cain, of Charleston; Dr. R. B. Johnson, of Camden, Secretaries.

The first action upon permanent organization was to invite the Faculty of the Medical College to participate in the deliberations.

The second measure was to take steps to have a law enacted requiring registration of births, marriages, and deaths.

The third resolution was in the interest of a better preliminary education for the profession; and the fourth, drastic measures to stop druggists from vending patent medicines.

Much of the time of the second day was taken up with Medical education in all of its phases, resolutions being adopted urging the Faculty of the Medical College of the State of South Carolina to continue to push forward her standards.

The College was commended for her high ideals already well known to the country at large, and asked to lengthen the course from four to six months.

The Southern Journal of Medicine and Pharmacy, edited by Drs. P. C. Gaillard, and H. W. DeSaussure, of Charleston, was unanimously endorsed by the convention.

Doctors practising Thompsonianism were severely scored as irregulars.

Under the inspiration of Dr. F. P. Porcher the association agreed to begin an investigation of the Indigenous Medical Botany of the State.

Councilor Districts were formed, and thirty-one Councilors given the responsibility thereof.

The following is a complete list of members at the first meeting, many of them known all over the world.

LIST OF MEMBERS OF THE FIRST CONVENTION.

Abbeville District.

J. B. Barratt. J. A. Gilbert
Isaac Branch T. J. Mabry
Thomas B. Dendy

Barnwell District

Amory Coffin

Charleston District

R. S. Bailey W. M. Michel
S. W. Barker J. C. McKewn
J. Bellinger J. R. Motte
E. S. Bennet James Moultrie
Henry Boylston W. L. Moultrie
J. W. Brailsford T. L. Ogier
D. J. C. Cain Geo. S. Pelzer
P. M. Cohen St. J. Phillips
Thomas Curtis F. P. Porcher
J. L. Dawson F. Y. Porcher
E. H. Deas J. B. Powell
H. W. DeSaussure J. F. Prioleau
Edward Elfe W. G. Ramsay
W. M. Fitch Henry Ravenel
C. Fitzsimmons F. M. Robertson
E. B. Flagg B. A. Rodrigues
H. R. Frost D. D. Sams
A. E. Gadsden J. W. Schmidt
P. C. Gaillard C. U. Shepard
E. Geddings E. D. Smith
A. P. Hayne Thos. Y. Simmons
E. Horlbeck E. S. Tennent
J. E. Holbrook B. F. Trapier
William Hume A. B. Williams
J. P. Jervev Henry Winthrop
Jos. Johnson Saml. Wilson
R. Lebby W. T. Wragg
Lawrence Lee Joseph Yates
A. G. Mackey

Colleton District

H. W. Ford Edward Mitchell
John May W. M. Shuler

Chesterfield District

Alexander Williams

Edgefield District

J. C. Ready A. W. Youngblood

Fairfield District

Thos. T. Robertson

Georgetown District

J. E. Easterling

Kershaw District

W. J. McKain R. B. Johnson

Lancaster District

W. C. Cauthen R. E. Wylie

Lexington District

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J. Quattlebum A. Vogt

Sumter District

J. A. Mayes

Union District

W. K. Sims

York District

J. R. Bratton W. E. Adams

TENTATIVE PROGRAM OF THE SOUTH CAROLINA PUBLIC HEALTH ASSOCIATION

Third Annual Meeting.

Charleston, S. C.,

April 16th, 1923.

Meeting will be held at the Charleston Chamber of Commerce.

9:30 A. M.—Address of welcome by Hon. John P. Grace, Mayor. Reply, Dr. Jas A. Hayne, State Health Officer.

President's Address by Dr. D. M. Crosson.

PAPERS:

Twelve Year's Experience in Rural Sanitation by Dr. L. A. Riser, Columbia, S. C.

Twenty years experience in Municipal Hygiene by Dr. J. M. Green, City Health Officer, Charleston, S. C.

Child Hygiene by Miss Ada Graham, State Supervisor of Child Welfare.

"A Plan For Obtaining Dental Clinics in South Carolina," by E. A. Earley, D. D. S., Director Dental Clinics, State Board of Health, Columbia, S. C.

The Laboratory as a Factor in Public Health by Dr. Geo. McF. Mood, Charleston, S. C.

Subject Unannounced—Dr. W. A. Mulherin, Augusta, Ga.

Get-together Lunch And Informal Round-

TABLE DISCUSSIONS

4:00 P. M.—Subject Unannounced, Dr. E. G. Williams, State Health Officer, Richmond, Va.

Modern Obstetrical Practitioner by Dr. Siebels, of Columbia, S. C.

Subject Unannounced, Dr. Leslie L. Lumsden, Surgeon U. S. Public Health Service, Washington, D. C.

Co-operation of the Women's Clubs in the Public Health Program by Mrs. Henry Hirschmann, President, Civic Club, Charleston, S. C.

Raising the Standards of Nursing, by Miss Mary C. McKenna, R. N., Columbia, S. C.

The T. B. Program in Public Health by Mrs. Chauncey McDonald.

SCIENTIFIC PROGRAM SOUTH CAROLINA MEDICAL ASSOCIATION
CHARLESTON, S. C. APRIL
17, 18, 19, 1923.

Subject to rearrangement of papers on final program.

Wednesday, April 18th, 1923, 10:00 A. M.

MEETING PLACE: Banquet Hall, Charleston Hotel.

Call to Order by the President.

Invocation by Rev. G. A. Nickles.

Address of Welcome, on behalf of the City, Hon. John P. Grace, Mayor.

Address of Welcome, on behalf of the Medical Society of South Carolina (Charleston County), Dr. A. J. Buist, President.

Response, Dr. J. H. Taylor.

President's Address.

Dr. C. F. Williams, Columbia, South Carolina.

Address, "Control of Malaria; The Medical Profession's Opportunity", Dr. C. C. Bass, Dean, Medical Department Tulane University, New Orleans, La.

READING TIME OF PAPERS

15 Minutes

DISCUSSION

5 Minutes

1. "Practical Tonsil Hemostatics", Dr. J. W. Jervey, Greenville. Discussion, Dr. J. F. Townsend, Charleston.

2. "A Brief Series of Uterine Suspension Cases (with Follow up Reports." Dr. John R. Boling, Columbia. Discussion, Dr. George Bunch, Columbia.

3. "The Significance of Bladder Symptoms," Dr. Milton Weinberg, Sumter. Discussion, Dr. G. T. Tyler, Greenville; Dr. H. L. Shaw, Sumter.

4. "The Diagnosis and Treatment of Nasal Sinus Disease, With Case Reports," Dr. William McWhorter, Anderson. Discussion, Dr. C. W. Kollock, Charleston; Dr. C. L. Kibbler, Columbia.

5. "All Legitimate, Progressive, Scientific Medicine and Surgery Should be Governed by One Code, and There Should be But One High Standard of Proficiency in the Practice of Medicine," Dr. D. M. Crosson, Leesville. Discussion, Dr. Robert Wilson Jr., Charleston; Dr. Heyward Gibbes, Columbia.

6. "Urological Diagnosis," Dr. Bruce N. Edgerton, Columbia. Discussion, Dr. W.

B. Lyles, Spartanburg; Dr. E. C. Baynard, Charleston.

Recess, one to three o'clock.

7. "Birth Control vs. Abortion," Dr. F. J. Carroll, Summerville. Discussion, Dr. R. W. Gibbes, Columbia; Dr. G. Fraser Wilson, Charleston.

8. Papers representing the South Carolina Pediatric Society.

8. "Artificial Feeding of the Well Child During the First Year," Dr. Wythe Rhett, Charleston. Discussion, Dr. R. M. Pollitzer, Charleston; Dr. M. W. Beach, Charleston.

9. "Feeding During the Second Year," Dr. S. G. Glover, Greenville. Discussion

10. "Difficult Feeding Case Principles," Dr. W. P. Cornell, Columbia. Discussion, Dr. D. L. Smith, Spartanburg; Dr. R. M. Pollitzer, Charleston

SPECIAL ORDER FOUR O'CLOCK P. M.

Address, "The American Medical Association, Illustrated." Dr. Chas. W. Richardson, Washington, D. C.; Member of the Board of Trustees, A. M. A.

11. "Goiter, With Lantern-Slide Demonstration," Dr. Sam Orr Black, Spartanburg.

12. "Some Endoscopic Problems, with Slides," Dr. E. W. Carpenter, Greenville. Discussion, Dr. Ray Finney, Gaffney; Dr. J. F. Townsend, Charleston.

13. "The Relative Value of Medical and Surgical Treatment of Duodenal and Gastric Ulcers," Dr. A. E. Baker, Charleston. Discussion, Dr. F. H. McLeod, Florence, Dr. J. B. Cannon, Charleston

14. "Osteochondritis Juvenilis Deformans, Review, Report of Cases," Dr. William Boyd, Columbia. Discussion, Dr. W. H. Johnson, Charleston; Dr. George Benet, Columbia.

15. "Some Country Doctor's Problems Solved," Dr. S. J. Rogers, Dillon. Discussion, Dr. Fraser Wilson, Charleston; Dr. L. M. McMillan, Mullens.

16. "The Mother Six Months After Delivery," Dr. Robert Seibels, Columbia. Discussion, Dr. Fraser Wilson, Charleston.

THURSDAY, 10:00 A. M.

1. "The Problem of Cardio-Vascular-Renal Disease," Dr. Robert Wilson, Jr., Charleston.

18. "Hypernephroma," Dr. Marion H. Wyman, Columbia. Discussion, Dr. LeGrand Guerry, Columbia; Dr. C. A. Mobley, Orangeburg.

19. "Gradenigo's Syndrome, with Report of Case," Dr. M. R. Mobley, Florence. Discussion, Dr. C. W. Kollock, Charleston, Dr. J. W. Jervey, Greenville

SPECIAL ORDER 11:30 A. M.

Address, "The Constructive Public Health Program of the New South," Dr. W. S. Leathers, President of the Southern Medical Association, Jackson, Miss.

SPECIAL ORDER 12:00 M.

Joint meeting South Carolina Medical Association, South Carolina Nurses' Association, South Carolina Hospital Association, with addresses by Dr. C. W. Kollock, of Charleston, and Miss Clara Noyes, Chief of the Bureau of Nursing, American Red Cross, Washington, D. C.

20. "Abscess of Lung, with Case Report," Dr. N. B. Heyward, Columbia. Discussion, Dr. V. P. Mikell, Columbia, Dr. G. H. Bunch, Columbia.

21. "Surgery and the Haemophiliac," Dr. Julius H. Taylor, Columbia.

22. "Inspection: It's Value as a Diagnostic Procedure," Dr. J. D. McDowell, York.

23. "The Present Status of Gastro-enterostomy; with Case Report," Dr. Carl Lepps, Sumter. Discussion, Dr. A. E. Baker, Charleston.

24. "Intubation in Laryngeal Diphtheria, and Antitoxine," Dr. L. O. Mauldin, Greenville.

25. "The Treatment of Toxemia of

Pregnancy with Convulsions," Dr. Thomas Pennel, Belton.

26. "Subluxation of the Pubic Joint," with lantern slides, Dr. Robert Taft, Charleston.

27. "Complete Inversion of Uterus at Termination of Second Stage of Labor," Dr. M. S. Moore, Charleston. Discussion, Dr. Fraser Wilson, Charleston.

28. "A Method of Treating Fracture the Clavicle," A. M. Bidwell, Captain M. C. U. S. Army.

29. "New Physiology of the Capillaries," Dr. J. Van de Erve, Charleston.

ALUMNI LUNCHEON MEDICAL COLLEGE, STATE OF SOUTH CAROLINA

A luncheon at one dollar per plate will be arranged for the graduates of the Medical College of the State of South Carolina, on Wednesday the 18th of April.

Alumni reunions of other colleges will be held at various times during the meeting.

WOMAN'S AUXILIARY TO ORGANIZE

In accordance with the authority of the American Medical Association a Woman's Auxiliary to the State Medical Association will be organized under the chairmanship of Mrs. W. P. Cornell, of Columbia.

HISTORIC NOTES OF INTEREST ABOUT THE SOUTH CAROLINA MEDICAL ASSOCIATION

A member of the association in the early days before the Civil War was designated "Fellow" and received a Diploma written in Latin.

The first president, Dr. James Moultrie, served for two years. He was elected President of the American Medical Association

in 1850, and evidently induced the Association to meet in Charleston in 1851.

The record shows that the hospitality of Charleston so impressed the national organization that a beautifully carved tablet affixed to a chair was presented to the South Carolina Medical Association to commemorate the event, the chair was to be used by the president at the annual meetings forever.

It would be of interest to know what become of this chair. The membership of the South Carolina Medical Association prior to the civil war, made exhaustive studies of the Medical Topography of the State, presenting elaborate maps, temperature, and barometric readings, etc. In other words the spirit of research was manifest to a high degree.

A copy of the transactions of the first six years, from 1848 to 1854 bound in one volume, was presented in 1900 to the late Dr. Walter P. Porcher, of Charleston, by Professor Yates Snowden, Department of History University of South Carolina, which was later presented to the Association by Dr. Porcher.

This priceless volume contains all that we know of the doings of the Association before the Civil War.

From many sources we learn that the members of the association distinguished themselves throughout that terrific struggle, and advanced the science of Medicine and Surgery.

It was estimated that there were one thousand doctors in the State at this period.

There are one thousand four hundred and fifty-two now.

The increase is singularly small.

On May the 20th, 1869, a reorganization meeting was held at the Roper Hospital Charleston.

Dr. Alexander N. Talley, of Columbia, was elected president. Drs. J. S. Buist and F. P. Porcher, Secretaries, and Dr. F. L. Parker, of Charleston, Treasurer. Commanding figures at this meeting

included such men as R. A. Kinloch, the great surgeon, F. M. Robertson, inventor of an obstetrical forceps, W. C. Norwood, of *Veratrum Viride* fame, and to whom the association erected a monument a few years ago near Abbeville, and also, Dr. S. Baruch, of Camden, who later became the father of Hydrotherapy in America, and one of the ablest physicians of New York City.

From 1869 to the present moment the minutes of the association are complete and illuminating.

June the 10th, 1879 the State Board of Health was organized. The following names constituted the Executive Committee: P. A. Willhite, M. D., Anderson, J. F. M. Geddings, M. D., Charleston, Manning Simons, M. D., Charleston, H. D. Fraser, M. D., Charleston, S. Baruch, M. D., Kershaw, J. F. Pearce, M. D., Marion, B. W. Taylor, M. D., Richland, Comptroller General Johnson Hagood, and Attorney General LeRoy F. Youmans.

The State Board of Health of South Carolina has since that date forged to a

foremost position in American Public Health work.

At the Darlington meeting, April 20th, 1894, the greatest epoch in the history of the Association transpired when a new constitution was adopted making the County Society the Corner Stone of organized medicine in America as proposed by the American Medical Association.

The following committee submitted this document:

Manning Simons, chairman, Charleston; T. G. Croft, Aiken; A. A. Moore, Camden; E. A. Hines, Seneca; Van Telburg Hofman, Sumter; C. B. Earle, Greenville; Henry Horlbeck, Columbia.

This step at once increased the membership from two or three hundred to nearly one thousand.

In 1895 the Journal of the South Carolina Medical Association was founded, and Dr. Robert Wilson Jr., of Charleston, was the first Editor-in-Chief.

Subsequent events are well within the memory of the majority of the membership.

ORIGINAL ARTICLES

THE VALUE OF HOSPITAL STANDARDIZATION TO THE MEDICAL PROFESSION

F. M. Routh, M. D., Columbia, S. C.

Hospital standardization has been the subject of much thought, and activity, on the part of hospital authorities, as well as the Medical profession during the past few years. Within a relatively short space of time much improvement has been accomplished; but unfortunately, there is a decidedly fertile field still undeveloped.

There is no phase of social activity, or humanitarian effort by which physicians can render a greater service, than to get behind the many opportunities for developing, and perfecting our Hospital facilities.

A modern Hospital is an extremely important link in the chain of development in any community. Unlike the ancient asylums of old, whose function it was to house the aged, helpless and infirm, the Hospital is a place of business, the object of which is the diagnosis and treatment of the various ills that afflict humanity. From an economic standpoint there is no business of more "far-reaching" importance, or of greater money value, than a properly equipped and administered hospital, where human ills may be sought out, and corrected if possible, and the sufferer returned for service at the earliest possible moment.

The mere fact that a Hospital has instituted measures that conform at least to what the American College of Surgeons have termed their minimum standard is not in itself a guarantee that this particular hospital is deserving of such a rating, and will

never be until Hospital authorities, as well as the Medical profession who care for patients in the institution, thoroughly realize their duties and obligations. These standards consider the welfare of the patient as the item of first importance. This is as it should be.

Briefly these standards are as follows:

1. The organization of a staff with representations from the various specialties of medicine.
2. Regular meetings.
3. The institution of a case record system.
4. Adequate laboratory facilities, including X-Ray and fluoroscopic work.

The Staff should consist of physicians and surgeons whose reputation for competency and honesty is unquestioned. They should be fair minded, just, and absolutely impartial.

Definite rules and policies should be instituted, regulating the professional work in the institution. There should be certain routine measures required in all cases, whether these be medical or surgical. Pre-operative preparation should as nearly as possible, be made routine, and this should apply to the maternity cases as well.

The insidious practice of fee splitting should be absolutely condemned. The surgeon, as well as the medical man who is so thoughtless as to make a contract, without the patients' knowledge is guilty of an act of dishonesty. This practice is of less frequent occurrence in the South than in some other sections of the country. This information was secured from representatives of the American College of Surgeons.

The Medical man who refers a patient to a surgeon, for any other reason than the absolute belief that he is giving his patient the best possible chance of recovery

is guilty of fee splitting. The surgeon who in any other way, except through ability induces the medical man to refer him cases is also guilty.

When the question of finances is discussed with all parties concerned taking a part in the discussion, any arrangement that may be made, can not in any way be termed fee splitting. It is certainly not just to the medical consultant for the surgeon to get all the fee. Where inducements are offered for surgical cases, there is a definite lowering of the surgical standard, because the inferior surgeon in order to procure work must offer inducements, commensurate with his lack of ability. This commercializing the unfortunate sick is a strictly dishonest act, and if permitted to continue, will do irreparable damage, not only to the Hospital, where the work is being done, but to the profession at large.

The Staff meetings are of extreme importance and of great benefit to all, the physician, the Hospital, and last, but no means least the patient. These meetings should include all medical men who attend patients in the institution. The Superintendent of the Hospital should provide a brief report of cases admitted, dismissed cases of infection, the unimproved, and the deaths. Complete case records, of the latter three classes should be particularly presented and carefully investigated. Should any inefficiency or carelessness be found, the party at fault shall be severely reprimanded. One such reprimand will do more to prevent a recurrence, than any other measure that could be adopted, and it will certainly have a decided tendency to raise the standard of work in the institution.

Attendance at these meetings will be in proportion to the dispatch and business like way that the discussions are carried out. If the Chairman of the meeting will handle the cases promptly, and see that there is a frank fair discussion, and to the point, there will be no trouble in attend-

ance, for the busy practitioner will soon realize that he is getting something worth while. Praise should be given where praise is due.

Case Records:

The value of a complete case record system does not admit of argument, its necessity is obvious. There are many instances where the Superintendent of a Hospital is embarrassed because he has no records when asked to present them. These records should contain the history of the patient, the physical examination, and a first impression, all laboratory and X-Ray reports, as well as autopsy records, and if the case is surgical, their pre-operative diagnosis. Some surgeons are opposed to giving their pre-operative diagnosis, because of the fear of making a mistake. If there are sufficient clinical symptoms to warrant an operation then there are just so many things that could be at fault, and to the surgeon's mind, one of these is the most probable. Why should he object to stating which one? Mistakes are frequently made, and it is no reflection on the surgeon's ability to make a mistake of this kind. It will, however, stimulate in him a desire not make the same mistake twice.

Let me say that we are making a great mistake in not going after more autopsies. From an autopsy we frequently gain more information, than is obtained from all other facts pertaining to the case put together, particularly, if we have come to no definite conclusion, and sometimes when we have the dope, is completely upset.

With the physicians' help, there is no reason why a hospital cannot have a complete cases record system.

It is also the duty of the hospital to make arrangements so that this information may be secured with the least possible loss of time for the busy doctor. The lack of foresight will usually explain why many hospitals fail to get the co-operation of the medical man in this respect. An historian trained in short-hand, and on the

job, may secure this data with practically no loss of time to the doctor. Another method is to have a dictaphone where the necessary information may be secured, and a stenographer, transcribe at her convenience.

Laboratory Facilities, X-Ray, and Fluoroscopic Work:

These are indispensable for correct and scientific work. It is one of the most important features of a properly functioning hospital. The plan to acquire these facilities is one of the most vexing problems that confront the smaller hospitals, principally because of lack of funds. This lack of funds, is primarily due to the fact that the medical profession generally, does not fully appreciate the importance of this work. One way of securing this is to charge each patient a small fee for which routine examinations, such as urine, blood, sputum, and feces are done. The Hospital may make arrangements with the laboratories of larger institutions, for doing the more complicated work.

There are many puzzling cases that lose all of their mystery after some simple laboratory test has been carried out. For instance I know personally of three patients who were subjected to useless abdominal operations because a simple examination of the stool was not done, and their intestinal parasites continued to cause trouble until removed. The medical profession will continue to receive well merited adverse criticism until they leave no stone unturned to arrive at a correct diagnosis.

For example; the dark field method of examination is simple and relatively inexpensive. By it we are enabled to make diagnosis of syphilis or to exclude it, long before the Wassermann is found positive. This gives the patient a much greater chance for complete cure.

Blood Chemistry particularly the glucose tolerance tests, give us invaluable information in many conditions. Interference with the function of posterior lobe of the pit-

uitary body, resulting in a hyposecretion will give an increased tolerance, in diabetes we have a decreased tolerance, with a typical diabetic curve. Many Hyperthyroid cases also give us a decreased sugar tolerance, as pointed out by Hamman and Hirshmann in 1917. Blood chemistry is important.

Johns of the Crile Clinic has recently been engaged in a fascinating study of glucose tolerance tests, in connection with diabetes, as compared with normals. This work has not yet been published, but if his opinions, gathered from a large series of cases are correct, it will greatly increase the value of this procedure. He believes that there are about 10% of the cases that we are at present treating for diabetes, because they show a glycosuria, are not really true diabetes, in view of the fact that they show a normal blood sugar curve. On the other hand about 10% of cases of true diabetes, often do not show glycosuria. If this work is confirmed, and we find this to be the case, then we have a method of recognizing what he terms the prediabetic stage of the disease, and of instituting measures of preventing many actual cases of diabetes proper. Every physician will readily appreciate the value of this.

Estimation of the Basal Metabolic rate is according to the best authorities the "sine qua non" in the diagnosis of early hyperthyroidism, and it certainly is our best guide in controlling thyroid therapy.

The value of a well-equipped X-Ray department in the modern hospital is indisputable, and this department should, if possible, be headed by a physician, who is well grounded in his work. The equipment is necessarily rather elaborate if the best type of work is to be done: a large X-Ray transformer with both up-right and horizontal fluoroscopes, a Potter-Bucky diaphragm and those staple accessories, that go with an X-Ray plant. Of course, it is understood that the less elaborate the equipment,

the more efficient must be the director of the department.

The diagnostic aids furnished by a Roentgenological department are almost too well known to mention, but I will take time to enumerate briefly some of the conditions in which the X-Ray is absolutely essential. Differentiation of a right sided renal calculi from appendicitis; the diagnosis of the pneumonia in infants, the X-Ray being far superior to any other known method. A differentiation of mediastinal tumors; cranial fractures and intra-cranial new growths; localization of foreign bodies; and last but not least, gastro-intestinal studies that not only aid in the diagnosis, but also in the location, and character of the lesion.

This department if its value is appreciated by the physicians who patronize the Hospital, can be made a real drawing card for the institution and can be a source of revenue rather than expense in the small hospital.

CLINICAL RESULTS FOLLOWING ONE THOUSAND NON-SURGICAL DRAINAGES OF PA- THOLOGIC GALL-BLAD- DERS

By George M. Niles, M. D., Atlanta, Ga.

This procedure, as stated above, has been employed in both a diagnostic and therapeutic manner for over four years. It has its proponents and opponents, it has been praised and censured, it has been considered a definite diagnostic and therapeutic step of progress by many conscientious men; while on the other hand, some men, just as conscientious, have not seen fit to accord it a place in their confidence. It would seem, therefore, that results embracing one thousand duodeno-biliary drainages, on practically two hundred patients, starting two and one-half years ago, and up to six month ago, would be of in-

terest. This method has been employed nearly sixteen hundred times by myself and my associate, Dr. H. N. Kraft, but none more recent than six months are included in this report.

Merely to refresh the memories of our readers, let us recall that the fundamental basis of this method springs from the discovery of the late Dr. S. J. Meltzer, of the Rockefeller Institute, of the fact that a solution of magnesium sulphate, when injected locally into duodenum will relax the tonus of the duodenum, the sphincter (Oddi's muscle) of the common bile duct, and that with this relaxation the gall-bladder will expel its fluid contents, partially or wholly, into the duodenum. In previous papers we have endeavored to point out the usual sequence of the bile flowing from the various components of the biliary system, the technic of the whole procedure, so that diagnostic conclusions might be formed, and therapeutic results might be satisfactorily attained. After a lapse of two and one-half years, we wish to express more positively our belief that it is possible by this non-surgical method to drain the gall-bladder and bile ducts of their fluid contents, within certain limitations, as described in previous papers, in which it was stated that a diagnosis could be more conclusively made. However, as an alternative method of treatment of certain types of gall-bladder diseases, in which there arises a question of opinion as to whether or not surgery is indicated; and as a supplementary method of post-operatively continuing the surgical principles of drainage in those cases incompletely cured by surgical measures alone, we venture to sound a more confident note. Therefore, in the treatment of bile-tract disease, in a series of over two hundred cases, we can express our belief that this rational method of treatment of early cases, is possessed of great possibilities for future development in the prevention and control of many of the later and more severe states of pathology of the

bile-tract, and we indulge in the hope that it can be extended to certain diseases of the liver proper and of the pancreas.

CLINICAL CONSIDERATIONS

Of the two hundred, eight were drained for chronic recurrent attacks of migraine; eight for chronic cholecystitis with gall-stones; two who had probable cancer of the gall-bladder and liver; five for catarrhal jaundice; three who had their gall-bladders removed for over three years; eighty-one for cholecystitis(in some of whom gall-stones were suspected); thirty-six for cholecystitis and choledochitis combined, and the others for chronic "biliousness" as manifested by indigestion, constipation, flatulence, malaise, and a sallow "muddy" complexion. In ten individuals only one 'tap' was recorded. In one case of suspicious cancer the results were poor and unpromising, so she was sent home, and soon succumbed. In the other case of suspected cancer, though several attempts were made, no bile was recovered. In only one case have we failed to get the tube into the pylorus, which may be considered a most fortunate experience. One patient has had twenty-seven taps, another twenty-three taps, (twenty-one of which had been obtained elsewhere); one has had eighteen two, fifteen; one, twelve, and the remainder from three to ten taps.

PRESENT EFFECT OF TAPS

A few have suffered some nausea during the seance, and six found it necessary to evacuate the bowels before the tap was concluded. Most of them report a free catharsis almost immediately afterwards, but no one has been unduly prostrated, or made really ill by this procedure. A few have complained of headache, but it is probable that this was due to lack of food until rather late in the day. Most of our patients have cheerfully co-operated with us, and seldom have shown much nervousness or fatigue. This method in its entirety, is

by no means a trying ordeal, for most of those undergoing it are perfectly willing to try it again; and we have at present about twenty-five patients who of their own accord come in for a "tap" every few months.

TIME OF SEANCE

The average time consumed is two and one-half to three hours from start to finish. When we find that the color of the fluid is lightening up, and we are obtaining true liver bile, we then conclude by douching out the duodenum with a solution of permanganate of potash. In a very few cases we have finished in two hours. Five hours is the longest we have consumed, and in this case the results were scanty and unsatisfactory. We have found as a general rule that if we do not succeed in getting into the duodenum and aspirating some bile in two and one-half hours time, it is best to stop and make another attempt a day or two later. We have generally gotten into the duodenum in from fifteen minutes to an hour, and after injecting the magnesium sulphate solution, have usually recovered bile stained fluid in from eight to fifteen minutes.

APPEARANCE OF RECOVERED FLUID

It is our custom to frequently inject into the stomach warm water as soon as the tube is introduced, and the patient lies down on the right side. This water not only washes out the stomach, but by stimulating gastric peristalsis aids the mental tip on the tube to pass into the duodenum. In about six per cent. of our cases the water returning from the stomach itself, has been more or less colored by bile. In most of our patients, however, the water is flowed into the stomach, through the tube, soon cleared up, and showed neither viscosity nor turbidity until the duodenum was entered. When the tip and some of the tube becomes engaged in the duodenum, the drippings of the aspirated fluid take on a pearly appearance, with an alkaline or neutral reaction. We then inject the magne-

sium sulphate solution, and begin gentle aspiration. The ordinary strength of this solution is twenty-five per cent., but in some robust individuals, or those with a tardy response, the thirty-three per cent. solution is employed. In nearly all the first change of color is a light yellowish-green, though in a few cases the color has suddenly become a turbid green or yellowish-black. As the tap progresses, if the color does not become more pronounced in thirty or forty minutes, we again inject the magnesium sulphate. Should the progress of the aspiration be slow, we inject several times, about 20 c. c. of quite warm water. About two injections of magnesium sulphate solution are generally sufficient, though we have often used the third where our results have not been quite satisfactory.

If the tap progresses as it should, the fluid soon assumes a darker color, in some instances black and tarry, in others a turbid yellow or green. Where there is a duodenitis, or a choledochitis present, there is much flocculent sediment, rendering aspiration slow and difficult. If the aspiration bottles are changed rather often during the seance, these variations of color will be more distinctly noted. From chronically infected gall-bladders or ducts, will flow a dark green or dark yellow bile, sometimes of a tarry consistency, with many flocculi appearing at intervals. This darkest bile is seldom over one and one-half or two ounces in quantity, and is followed by other bile, lightening in color until the fresh yellow liver bile appears. In some instances we have been able to show three or four layers of distinct and different colors, ranging from yellowish-green to dark yellow, to almost black, and then the lighter yellow.

RESPONSE OF PATIENTS TO TAPS

Most patients respond quickly and easily, whole others require much labor and patience to obtain adequate results. About one-third of our patients pass the tube into the duodenum in less than a half an hour,

and the bile is flowing in less than fifteen minutes later. These generally are given two injections of the twenty-five per cent. solution, the seance being concluded in a little over two hours. Approximately another third, being affected with a certain amount of duodenitis, require much pumping in, and aspirating out, of small amounts of warm water to clear the ducts of mucus, flocculent sediment, and perhaps many mucous plugs. When these are cleared out, the rest is comparatively easy. The remaining one-third are slow to respond, the tube is slow to enter the duodenum, the mucus is hard to extract, the sphincter muscle of Oddi is slow to relax, and the gall-bladder itself lags in its contraction. These cases tax our patience and ingenuity. In only nine of them, though, have we failed to aspirate some bile at the first seance. In two of these the taps were satisfactory on the second and third effort. In seven however, after the third trial, without any results whatever, no other attempts were made. In achieving satisfactory results with some of these difficult duodenal taps we should remember that success, like genius, resolves itself into "the infinite capacity for taking pains."

FREQUENCY OF TAPS

In a few instances, where time is a desideratum, we have made daily taps on three or four successive days. Our preference has been, however, to administer taps on alternate days until three or four have been completed, and the others at intervals of five days to a week. Often we have advised patients to keep up the taps every two or three weeks for several months. If practicable, not less than three taps should be given every individual.

CLINICAL RESULTS

After pursuing this method two and one-half years, we feel that our feet are beginning to be planted on firmer foundation, and we are becoming more "grounded in

the faith" as time passes. Two of about twenty patients treated for chronic cholecystitis, have seemed well over a year. Two of our migraine patients have been well six or more months. In our gall-stone patients, though we informed them that surgery would be necessary, they desired to try out the taps, and every one claimed to feel better in many respects after each seance. Twelve who suffered with chronic "biliousness" and constipation have apparently been cured of both. The cases of catarrhal jaundice all cleared up in less than two weeks. A number of our patients, who have been surgically drained in the past and in whom results were not ideal, have said that they derived as much benefit from this form of drainage as from the surgical method, without its attendant pains and penalties.

About sixty-five per cent. of those who have received three or more taps have seemed substantially benefited. About fifteen per cent. have seemed moderately improved. Five per cent. have claimed no improvement whatever, and their claims are probably correct. May we ask in this connection if the results of surgical drainages are definitely better? The others are still under observation. Some of them appear improved, and the others uncertain as to their progress. On the whole we feel that in these two hundred patients our labors have not been in vain.

PERMANENCE OF GOOD RESULTS

This is a mooted question, and we are not disposed to be too cocksure or dogmatic in our claims. We believe that many cases of cholecystitis, choledochitis, either separate or combined, where there is no gross pathology present can be permanently cured by this method. Many cases of migraine can be cured or considerably mitigated, and that complicated condition known as "biliousness" seemingly can be overcome to a marked extent. I am often asked, "Will it be necessary to keep up these drainages

at certain intervals for an indefinite length of time?" My answer is, "Suppose it does. If by an occasional drainage from the gall-bladder of static and pathologic bile, the patient obtains relief, lasting for several weeks or months, and this emptying produces neither prostration nor confinement in a hospital, why not continue it as the occasion demands?"

Like some sewerage systems, faultily constructed, which fail to function adequately, many individuals possess gall-bladders that are intrinsically faulty, though perhaps not surgically so. If by an occasional drainage, these gall-badders may satisfactorily function, and their possessors be made infinitely more comfortable, the fact that it should be kept up for a while should not militate against it as a general clinical proposition. Some gall-bladders tend to stasis for various reasons, and to expect that after cleaning them they will *always* remain perfectly clean is unreasonable.

CONCLUSIONS

First: Non-surgical drainage of pathologic gall-bladders is a worth while clinical method, and in competent hands will produce good results in a liberal percentage of cases.

Second: That this method is not indicated in gall-bladder disease in which the cystic duct is obstructed in such a way that the gall-bladder is unable to discharge its fluid contents; nor can it supplant surgery where there are gross pathologic lesions of the gall-bladder, as empyema, dense pericholecystitic adhesions, nor where gall-stones are present.

Third: In many cases, by early and adequate drainage, this method may clear up certain cases that without it would have developed into surgical states.

Fourth: Its employment is indicated in jaundice, cholecystitis, choledochitis, migraine, and those indeterminate "bilious" conditions, that have resisted other treatment.

Fifth: None of our patients have suffered marked depression nor illness as the result of this method, nor have we seen reported any such mishaps by other workers in this field.

Finally: We believe it possesses potentialities for good that will eventually be recognized by those unbiased observers who give this procedure their sympathetic consideration.

THE LEUCOCYTE COUNT IN DIAGNOSIS AND PROGNOSIS OF APPENDICITIS

By H. W. Rice, M. D., Columbia, S. C.

The phagocytic function of the polynuclear neutrophile leucocytes constitutes the first line of defense of the body against bacteria and their toxins. The onset of an infection is signalled by the mobilization of the phagocytes against the enemy, together with an immediate stimulation of the bone marrow to an increased production of new leucocytes. Experimenting with rabbits, Wells (1) found that the intravenous injection of cultures of typhoid bacilli resulted in the following sequence of events:

A few minutes after the inspection the bacilli were found in the spleen, while they had disappeared from the circulation. Coincident with this phenomenon there was a great reduction of the polynuclear neutrophils in the blood stream and at the same time a marked increase of these cells in the spleen, liver and lungs. After two hours the polynuclears (2) began to increase in the peripheral circulation and the total count reached 18,000 within 20 hours after the injection of bacteria. In blood from the lobe of the ear before the injection the leucocytes had counted:

				14,000,
1 hour afterwards they were				2,000,
2 hours	"	"	"	900,
4	"	"	"	1,600,
12	"	"	"	10,000, and
20	"	"	"	18,000,

The explanation of these striking phenomena would seem to be that the phagocytes or polynuclear leucocytes normally present in the body at once begin the attack on the invading organisms, following them into the internal organs. (5) They are soon reinforced by new leucocytes produced by the bone marrow under the foreign stimulus resulting in a hyperleucocytosis throughout the blood stream.

In the natural onset of infections, however, there is a more gradual introduction of bacteria into the blood stream and consequently an absence of this primary leucopenia. We have no experimental evidence as to the time that actually elapses between the initial invasion of infections and the occurrence of a leucocytosis, but it may be assumed that the appearance of the leucocytosis precedes the clinical symptoms. Therefore, the presence of a leucocytosis means an established infection. Systematic daily records of the leucocyte picture in the various infections would unquestionably greatly add to our information as to the actual happenings in the blood stream during the course of these diseases.

In the interpretation of any leucocyte picture certain recognized physiological variations must be considered as well as all possible coexisting pathological states.

During the first two days of life the blood shows a leucocytosis of from 12,000 to 35,000; in childhood the mononuclears range from 40% to 60%. In the normal digestion of a protein meal a lymphocytosis occurs and in infants and children an attack of indigestion may send the leucocyte count up to 40,000 or higher. A count of 16,000 or more has been observed in normal pregnancy and labor is attended by a leucocytosis up to 35,000. Women have

slightly higher mononuclear count than men.

In the so-called acute abdomen the leucocyte picture has attained its greatest utility for here an immediate or delayed correct diagnosis often means success or failure in the treatment of the condition. But even in this domain the blood count may be most difficult to interpret. Many conditions must be differentiated. Aside from the leucocytosis of almost any acute inflammation of the abdominal organs, hemorrhage from traumatism or from a ruptured gastric or duodenal ulcer, or a ruptured Ectopic gestation, or an intestinal obstruction, a pneumonia simulating an abdominal condition, or a malignant tumor may produce a leucocytosis. In ether narcosis and in postoperative conditions a leucocytosis occurs.

In the diagnosis and prognosis of appendicular conditions our knowledge unfortunately is still incomplete. Surgically we are past masters in operations in this field, yet we often have to counsel operation while ignorant of the pathology present. It must be admitted that we have been superficial in our studies of the appendix. Surgeons, or operators I should say, have been most derelict in these cases because they have too often failed of a great opportunity to correlate the preoperative clinical course and the operative findings. This fault perhaps must be charged to present-day incoordinated specialism. The general practitioners in whose hands these cases arise turn the patient over to the operator without clinical records, while the operator may lack the scientific conscience properly to correlate and record the data available. Why should we not be able to say to these patients: you have only a congested appendix, or your appendix is gangrenous, or there is a walled off abscess? To some extent the blood picture helps to a more accurate diagnosis in these cases. The polynuclear percentage is supposed to indicate the severity of the infec-

tion while the total leucocyte count measures the resistance of the patient to the disease.

Gibson (2) has formulated a chart to show the ratio between the total count and the polynuclear percentage under the normal resistance of the body to inflammatory conditions:

With a total count of 10M the polys. 75%

With a total count of 15M the polys. 80%

With a total count of 20M the polys. 85%

With a total count of 25M the polys. 90%

Sondern (3) correlates the leucocyte picture and pathologic findings as follows:

(1) A leucocyte count of any degree and a poly. 70% excludes pus and gangrene.

(2) A total count slightly above normal with the polys. 80% indicates severe infection and low resistance.

(3) A high total count with polys. over 35% suggests gangrene or pus.

Hewitt (4) in 100 unselected cases makes the following groups:

Group I. 35 cases with infection confined to the appendix the average total count was 16,650, the average polys. 81%.

Group II. 45 cases appendix perforated and pus or gangrene, but infection delimited, average total 17,517, polys. 87.3%.

Group III. 20 cases appendix ruptured, with infection not circumscribed, including cases of general peritonitis, average total 20,072, polys. 89.5%.

In this series it will be noted that there is a gradual increase in both the average total counts and poly. counts as the pathological condition becomes more serious. However, in one case with a total poly. only 65% there was a walled off abscess of several days duration.

SUMMARY:

Total Count—Patient's resistance to the infection.

Poly. Count—Severity of the infection.

IN THE DIAGNOSIS:

(1) The total count alone—Questionable value.

The poly. count alone—Much value.

Total count and poly. count—Greatest value.

IN PROGNOSIS

(2) High total with high poly.—Severe infection C. good resistance.

High total C. poly. 80%—Moderate infection C. good resistance.

Low total C. high poly.—Severe infection C. poor resistance.

Low total C. low poly.—No infection or quiescent.

It is probably safe to conclude that whenever there is an infection of the appendix there will be an increase in the leucocyte count provided the organisms of the infection or their toxins are being absorbed into the circulation at the time the blood is taken. Exceptions to this rule may be more apparent than real. A walled off abscess of some days' standing, a pus appendix discharging backward into the cecum, or an abscess which has ruptured into the contiguous intestine might show no leucocytosis because at the time the infec-

tious agents are not being absorbed. In other words, the infected area may be quiescent or draining externally.

In conclusion, we may say with DaCosta: "The surgeon who attempts to use the blood count in appendicitis as a definite pathognomonic sign will soon run afoul of diagnostic disasters, but he who regards it only as a symptom invariably to be correlated with equally if not more important clinical manifestations, cannot fail to find this method of inquiry of signal value in routine clinical surgery."

References:

1. Wells Jour. Infectious Dis. 1912 Vol. XX page 143.
2. Gibson quoted by Heyd. Surg. Clinics of N. A. Apr. 1921, page 555.
3. Sanders quoted by Heyd. Surg. Clinics of N. A. Apr. 1921, page 556.
4. Hewitt Annals of Surg. 1917 Vol. XVI page 143.
5. Bull Jour. Exper. Med. 1915 Vol. XXII pages 481 and 487.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

BURNS

This most interesting subject is concisely discussed in a recent number of "The Surgical Clinics of Chicago," by Kellogg Speed.

His paper is based on a study of 496 cases of burns and scalds received in many ways. Some, the result of domestic misunderstanding between parent and offspring or between husband and wife. Hot greases predominated in this group.

Many children were burnt from playing about bon fires, from tipping kettles containing soups or drink, or from falling into boiling water.

In the 496 cases treated at the Cook County Hospital during the past 3 successive years, 151 died, a mortality of 27 per cent. Of the 151, 70 occurred in children under 5 years of age, and a very large proportion of the total deaths occurred within the first 36 hours, the result of shock. Delayed deaths are usually the result of nephritis, exhaustion, or bronchopneumonia.

Speed divides the treatment into two types, the primary and secondary.

The primary included first aid and care during the subsequent acute stage until the wound heals.

Secondary treatment includes operative and orthopedic procedures to prevent contracture and deformities.

The first consideration in bad burns is the shock. This is to be overcome, by heat, stimulation, and morphia. The clothes should be cut away and not removed in the

usual way. The patient wrapped in warm blankets, if buttocks or adjacent regions are not involved, hot coffee enemata are useful.

Weak picric acid (alcoholic) solution is as good as any other for the first few treatments.

The ideal treatment is the one which combats shock when present, relieves pain and induces rapid healing with the minimum of contractive. When there is a tendency for a limb to contract, it, especially in children, should be tied loosely to the end or side of the bed, the bed then being tilted in the opposite direction.

Of the treatments themselves, there are two methods, the open and the closed. The former uses weak antiseptics and no coverings whatever, gauze, cotton, and the like not being utilized. The latter is best exemplified by the ambrine treatment. That is, the parts are thoroughly dried by a hot-air dryer. A coating of ambrine is then applied, one or two thicknesses of meshed gauze are laid over this, and another coating of ambrine is applied by means of an atomizer or thin brush. The whole acts as a shield or shell, maintains moisture and uniform temperature, and predisposes to rapid epidermization. It is less valuable in children than adults, as the former tend to pick or pull or push it off. Within 24 to 36 hours it is normally and naturally pushed off by the accumulating underlying secretions, at which time it is painlessly removed and the parts are again dried and covered as before.

DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

HYPERTRICHOSIS

Hypertrichosis is abnormal or excessive growth of hair. The term may be applied to an increase in the size of hair, or to the number of hairs. It may be general; cases have been reported where the whole body is covered with a luxuriant growth of hair. It may be local for example a pigmented nevus usually show hypertrichosis, certain portion of the body often and unfortunately the face in women may be the site of marked hypertrichosis. The cause is unknown, many theories have been advanced. It has been thought to favor certain races, certain families, and persons of certain sexual characteristics. It is well known that brunettes are more susceptible than blonds. Certain local applications are thought to cause an excessive growth of hair. However, those who know most about the growth of hair realize that to date our knowledge of what makes hair grow is nil.

In certain instances hypertrichosis becomes a serious problem for the individual concerned. In women, both young and old, it is often the cause of considerable mental worry, and the physicians who is consulted in these cases are often at loss both as to the advice and treatment to be given. As a result the patient seeks the advice of "beauty parlors," and advertisements whose remedy is some epilating powder, which only cuts the hair off at the level of the skin, having about the same effect as shaving.

There are only two ways of permanently removing superfluous hair. The X-ray in sufficient dosage will permanently remove the hair, but such a dose of X-ray will result in sufficient atrophy of the skin to cause a disfiguring scar. The second

method, electrolysis, the removal of hair by the electric needle, is the only method advised and practiced by Dermatologists. The degree of success attained in treating hypertrichosis by electrolysis depends on the skill and experience of the operator.

The proper equipment for this work consists of a milliamperemeter and voltmeter sufficiently graduated to enable one to get a direct electric current of from two to five milliamperes. Two silk cords, a contact holder, needle holder, and a fine iridoplatinum needle completes the outfit. The needle is connected with the negative pole and the contact plate with the positive pole; to successfully remove the hair it is necessary to canterize the whole length of the hair follicle. The current is then turned on by placing the contact plate in the palm of the hand. In ordinary cases two milliamperes for ten seconds is sufficient to completely destroy the hair follicle and enable the operator to remove the entire hair. Microscopic examination of the removed hair will show whether or not the hair has been broken off or completely removed.

There are certain types of hypertrichosis on the face, favorable for treatment by the above method, and some that are not. Obviously it would be impossible to remove completely the head of a man, which consists of approximately twenty thousand hairs. Again it would be obviously impossible to remove a thick growth of fine downy hair which often causes much annoyance to certain ladies. The favorable cases for electrolysis are those which have coarse black hairs scattered about the face, in these cases it is possible to cauterize the hair follicle and completely remove the superfluous hair with a minimum of scarring.

PUBLIC HEALTH

LEON BANOV, M. D.,
Health Officer, Charleston County,
Charleston, S. C.

UNCINARIASIS, A COMMUNITY PROBLEM

"Hookworm infection works subtly through long periods of time. Its cumulative effects are handed down from generation to generation. The disease destroys economic efficiency and social development on the one hand, the while it undermines physical and mental health on the other. It is a menace and an obstacle to all that makes for civilization. As a handmaiden of poverty, a handicap of youth, an associate of crime and degeneracy, a destroyer of energy and vitality, it stands in the very forefront of diseases. Its effects express themselves in stunted physical and mental growth, blighted health and efficiency, retarded economic progress, and general degeneracy and decay. Labor is impaired, home standards are lowered, mental development is inhibited, and there is a tendency for the human machine to wear out before its time."

This sweeping indictment by the International Health Board of a parasite that has formed an inordinate attachment for mankind—to the complete detriment of the attachée—may sound like the hysterical exaggerations of a hyper-enthusiast, but even a casual survey of any rural section where the hookworm has been permitted to flourish for any length of time will convince the most skeptical that hookworm, poverty and physical and moral degeneracy usually go hand in hand.

That Uncinariasis has existed and is still

existing upon an extensive scale in Africa, Asia and South America is not very surprising. That this disease is allowed to flourish in the Southern section of our United States however, is a living indictment of our indifference concerning our physical welfare.

Our State is essentially a rural State, and as such has more than its share of hookworm infection. That we pay heavily for the luxury of harboring this parasite, goes without saying; and the miles of idle and waste lands that stretch on each side of the tourist passing through the State, represent so many monuments to the thrift and the industry of the hookworms and the sloth and the idleness of the men who harbor these.

Uncinariasis is one of the few diseases of man with which we may claim to be thoroughly familiar. We know the entire life cycle of the hookworm from the laying of the egg to the final development of the adult worm. We also know how the infection is spread, and how it may be controlled. We can even boast of at least two specifics against the disease.

Knowing these things then, we can see no real reason for the continued existence of the hookworm—unless perhaps it is community laziness; and the physician who calmly goes on prescribing tonics for his patients, while the majority of them are being slowly exsanguinated, by the hookworm should begin by prescribing a dose of thymol for himself.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

RECOGNITION OF MALIGNANCY IN THE URINARY TRACT

One who is in a position to observe a large number of patients suffering from malignant conditions, other than those which are superficial, is impressed with the fact that even in these days of thorough medical education, malignancy is often unrecognized. This is particularly true in cases of cancer in the urinary tract. It is astonishing how many cases are observed in a large clinic, in which no attempt has been made by the local practitioner to establish diagnosis, even though cancer involving either the kidney or the bladder is so commonly attended by blood in the urine. If with the first evidence of hematuria the patients had been subjected to a rigid examination, including roentgenography and cystoscopy, many would have been operated on at a stage in which the prognosis would be favorable instead of presenting themselves with an advanced or inoperable growth. While it is true that hematuria is not always caused by malignancy, nevertheless, whenever it does occur the possibility of malignancy must be carefully excluded.

A careful study of the various types of hematuria is of the greatest clinical importance, and from it much can be discovered concerning the nature of the disease and its localization. For clinical purposes, cases of hematuria may be divided into two groups, those with bladder symptoms and those without, such as frequency dysuria or urinary obstruction. Hematuria without bladder symptoms is usually of renal origin. The two most common renal

lesions are neoplasm and essential hematuria. Hematuria with renal neoplasm is usually characterized by profuse bleeding for a short time, seldom longer than a day or two. When it is continuous over a period of weeks or months it is rarely due to renal neoplasm, but often indicates the condition which for want of a better term, is called essential hematuria. Therefore, profuse hematuria of short duration without bladder symptoms demands careful investigation as soon as possible, since it is obvious that if renal neoplasm is present its removal in the early stages offers the patient the best chance for recovery. Hematuria occurring with bladder symptoms is more confusing. If both bleeding and bladder symptoms disappear in the course of a few days, the lesion may be but a passing infection. If they persist longer, or recur at infrequent intervals, there is usually a surgical condition present, and the patient should be referred at once for careful urologic investigation, since tumors of the bladder are frequently the cause of such symptoms.

Differentiation of a passing urinary infection and vesical neoplasm in its early stages is probably the source of greatest confusion. The general practitioner may be justified, in the presence of a short attack of hematuria with vesical symptoms, in giving the patient temporary treatment, such as urinary antiseptics, rest in bed, and so forth. But should there be a repetition of these symptoms, or should they be prolonged for more than a few days, it is a grave injustice to the patient not to advise urologic investigation. All too often patients are seen with tumor of the bladder, who have had repeated attacks of dysuria with hematuria, and who have been treated by the family physician, by urinary

antiseptics and lavage for a period of six months or even a year, without an attempt having been made to ascertain the cause of the symptoms. As a result the patients' chance for recovery by surgical treatment has been greatly reduced and in some instances entirely lost.

It is also true that malignancy may exist without evidence of blood in the urinary tract. This may occur with renal neoplasm, which may become advanced sufficiently to cause a large tumor in the flank without any evidence of hematuria. If there is hematuria and a unilateral tumor in the flank, the diagnosis of renal neoplasm is self-evident.

Malignancy in the prostate gland may also exist without the presence of hematuria. Patients are often observed by the urologist who have been treated by the general practitioner for prostatic obstruction, but frank carcinoma of the prostate, evident on rectal examination, has been overlooked. Obviously the common occurrence of prostatic malignancy is not generally appreciated. As a rule the firm, nodular, irregular gland is easily recognized on rectal palpation, and a special knowledge of urology should not be necessary in order to differentiate hypertrophy and carcinoma. It should be necessary to repeat that rectal palpation is routinely necessary in the adult male who has symptoms of disease in the urinary tract. It must also be remembered that cancer of the prostate gland may exist without much subjective evidence

of urinary obstruction. The first clinical evidence of this condition may consist of severe pain referred to the lower lumbar area, or radiating to the hips. These symptoms have commonly been regarded as due to sciatica, until rectal palpation quickly revealed the underlying etiologic factor. It should be remembered, therefore, that in every such case, even though there may be no subjective urinary symptoms, rectal examination of the prostate should always be made. It is surprising how often patients are observed who have had a recent prostatectomy elsewhere in whom rectal palpation reveals a diffuse recurring cancer of the prostate, which had been unrecognized prior to operation and even at operation. Needless to say, if cancer of the prostate exists, prostatectomy is rarely indicated. If recognized early, great improvement and prolongation of life can be expected from thorough treatment by radium.

It would be impossible, in a brief discussion, to consider all the sources of confusion which may arise in recognition of malignancy in the urinary tract. The salient clinical data which should lead the practitioner to suspect the presence of malignancy should be emphasized. It is evident that early intelligent observation, and the advice of the general practitioner is of the greatest importance to the patient suffering from malignant disease involving the urinary tract. Early recognition of this condition and co-operation with the urologist are important factors in the patient's recovery.

SOCIETY REPORTS

THE GREENWOOD COUNTY MEDICAL SOCIETY MEETING

Dr. C. J. Scurry, Vice-Pres., presided over the meeting on March 2nd.

Eleven members answered to roll call.

Two papers of interest were presented, "Stricture of the Rectum" by Dr. W. P. Turner; and "Malaria" by Dr. J. L. Ward. The discussion of the papers were entered into by the full membership present.

Dr. Page reported an interesting clinical case resembling typhoid, but believed by him to be an ulcer of the lower bowel.

Officers for the year 1923, are as follows:

Pres., J. F. Simmons, Vice-Pres., C. J. Scurry, Secretary-Treasurer, A. D. Burnett,

Delegates to the annual meeting, Drs. J. F. Simmons and J. C. Harper.

BARNWELL COUNTY.

At the last meeting of the Barnwell County Medical Society. The following officers were elected to serve for 1923.

Dr. Charles A. Hensley, President, Dr. Lang W. Anderson, Secretary and Treasurer.

Delegates to the annual meeting in Charleston, Drs. W. C. Smith, and Lang W. Anderson.

THE CHARLESTON MEDICAL SOCIETY

The Medical Society of Charleston County met on the 23rd, of January 1923.

Twenty-six members present, Dr. A. J. Buist, President, in the chair.

Dr. A. R. Taft presented a paper on X-ray examinations of the heart, with illustrations.

Discussion by Drs. Pollitzer and O'Driscoll.

"Breach Extraction" by Dr. G. F. Wilson, was discussed by Drs. McCrady and Jenkins. Clinical case report of stab wound, with unusual feature, by Dr. D. L. Maguire, was of marked interest. Discussion by Drs. W. A. Smith, L. A. Wilson, and A. J. Buist.

Election of a council from the Society to handle a special bequest for the Roper Hospital resulted as follows: Drs. Cathcart, Ed. Parker, and G. McI Mood.

The officers for the present year are Dr. A. Johnson Buist, President, Dr. Frances B. Johnson, Vice-President, Dr. J. C. Sosnowski, Secretary, Dr. J. S. Cannon, Treasurer.

Delegates to the annual convention, Drs. T. G. Simmons, C. W. Kollock, F. L. Parker, G. McI Mood, and J. S. Rhame.

ANDERSON COUNTY MEDICAL SOCIETY MEETING

March 14th, Dr. J. E. Watson, President, called the society to order, twenty-two members out of the twenty-six on the roll answering.

Dr. Thomas Pennell, of Belton, S. C. presented a paper on "Toxemias of Pregnancy" which was fully discussed by each member present.

Dr. L. O. Mauldin, Chairman of Councilors, and Dr. S. G. Glover, of Greenville were guests of the occasion, and made interesting talks.

The officers for the present year are, Dr. J. E. Watson, President, Dr. C. H. Burton, Vice-President, Dr. G. S. Clinkscales, Secretary and Treasurer.

Delegates to the annual meeting, Drs. J. R. Young and Thomas Pennell.

The Williamsburg County Medical Society in session February 22, 1923, elected officers, delegates, alternates, and new members as follows:

OFFICERS: President, Dr. T. S. Hemingway, Kingstree, S. C., V-President, Dr. W. C. Rogers, Hemingway, S. C., Sec.-Treasurer, Dr. B. M. Montgomery, Kingstree, S. C.

DELEGATES: Dr. B. M. Montgomery, Kingstree, S. C.

ALTERNATES Dr. E. T. Kelley, Kingstree, S. C.

NEW MEMBERS: Dr. R. W. Sease, Kingstree, S. C.

The Chair appointed the following Board of Censors:

Dr. W. G. Gamble, Kingstree, S. C., Dr. C. D. Jacobs, Kingstree, S. C., Dr. E. T. Kelley, Kingstree, S. C.

B. M. Montgomery,
Secretary.

THE CHESTER COUNTY MEDICAL SOCIETY

March the 13th, the Chester County Medical Society met in regular session, Dr. H. W. Ross presiding.

Eight out of the nineteen members were present.

Minutes of the last meeting were read and approved.

Officers elected for 1923, are as follows:

President, Dr. R. H. McFadden, First Vice-President, Dr. J. P. Young, Secretary and Treasurer, Dr. W. J. Henry.

Delegates to the annual meeting, Dr. W. R. Wallace and W. J. Henry.

THE SPARTANBURG MEDICAL SOCIETY

On February 23rd, the Spartanburg County Society held an interesting meeting Dr. H. H. Workman presiding.

Eighteen members were in attendance. There are fifty members enrolled on the books of this society.

The general discussion was on the subjects of Chiropractic practitioners; and a general hospital for Spartanburg county.

The society is in fine working order.

The officers for 1923, are Dr. H. H. Workman, President, Dr. J. R. Sparkman, First, Vice-President, Dr. M. T. Clark, Secretary, Dr. Harry Heimish, Treasurer.

Delegates to the annual meeting, Drs. A. R. Fike, W. P. Coon, W. W. Boyd and W. B. Lyles.

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ABSTRACTS

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MALIGNANT TUMORS OF THE SUPRARENAL GLAND

William E. Stevens, San Francisco (Journal A. M. A., Jan. 20, 1923), reports the case of a man who complained of pain in the left upper abdominal quadrant. Two hours after lifting a trunk he had been seized with a sharp pain in the left groin, and became very weak and fainted. Operation the following day revealed retroperitoneal bleeding with hematoma. He left the hospital in five weeks. Two weeks later, he complained of a steady, severe, sharp, cutting pain in the upper left abdominal quadrant and left lumbar region. He was taken to another hospital, and the pain disappeared in two weeks. He felt fairly well for seven months, and then had another attack similar to the foregoing. In addition to pain, he now also suffered from anorexia, nausea, marked weakness and slight headache. He was again operated on, but apparently nothing was found. (A pyelogram taken at this time revealed a lateral elongation and narrowing of the left renal pelvis, together with an absence of the inferior calix). He had had pain in the incisions since that time. A diagnosis of retroperitoneal postoperative adhesions following hematoma was made. Six months later, the patient was still complaining of the same symptoms. Operation revealed a large, retroperitoneal, abdominal mass, lying below the stomach and splenic flexure of the colon. Inferiorly, it extended well down into the loin, medially to the midline, and above beyond reach. No fluid was found on puncture. On return to consciousness five minutes after the first convulsions he was blind, but vision returned

in a few minutes. The mass increased rapidly in size, the abdomen and lower chest becoming markedly distended. The feet and legs became edematous. The patient died eight weeks after operation, twenty-two months after the beginning of symptoms. The necropsy findings led to the diagnosis of hypernephroma of the left suprarenal gland. In this case there seems to have been a definite connection between the trauma and the development of the hypernephroma. An early diagnosis was rendered difficult by the appearance of symptoms so soon after the injury, by the bleeding and hematoma found at the first operation, and because of the negative findings at the second operation. Later symptoms, pigmentation of the skin, tumor mass, weakness and gastro-intestinal symptoms, were suggestive of a tumor of the suprarenal gland. An interesting feature of this case was the brownish discoloration of the skin, although but one of the suprarenal glands was affected. Another unusual feature was the comparatively slow progress of the disease.

INTRACUTANEOUS REACTIONS IN PERTUSSIS

No specific reactions were obtained by Edwin A. Riesenfeld, New York (Journal A. M. A., Jan 20, 1923), from the use of various preparations of Bordet-Gengou bacilli injected intracutaneously to prove the presence of the disease, or a natural or an acquired immunity. Positive and negative results alike were obtained in children having the disease, in children with an immunity, and in children developing the disease after the injection.

CORRESPONDENCE

March 28, 1923.

Dr. E. A. Hines,
Seneca, S. C.,
Dear Dr:—

I am a graduate of Medical College of South Carolina and am intending attending the meeting in Charleston in April, I will thank you to send me any information you may have in regard to the meeting program, etc.

Yours truly,
J. F. McKay.
Bull's Creek, N. C.

Fairhaven, Mass.
March 19th., 1923.

E. A. Hines, M. D.,
Seneca, South Carolina.
Dear Doctor Hines:—

In the Journal A. M. A. page 704—March 10th., I note The South Carolina Medical Association will hold its 75th., anniversary home-coming meeting in Charleston, April 17-19.

In 1889-90 I had the honor and privilege of serving as Professor of Practice of Medicine and of Pathology in the Medical College of the State of South Carolina at Charleston. In the years that have passed I have never lost my interest in the college, or forgotten the many courtesies and kindnesses of my esteemed colleagues of the Faculty, and I would greatly appreciate receiving a program of the meeting and such other information as you might care to send me, though I cannot come to the meeting.

Thanking you in advance for your courtesy, I am,

Yours very truly,

J. Richard Taylor, M. D.,
University of Pa. 1878.

"The Anchorage"
No. 313 Main St.
Fairhaven, Mass.

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STANDARDIZATION OF EPINEPHRIN

ALTHOUGH epinephrin has a known, definite chemical constitution, its activity cannot be gauged by chemical methods of assay. This is so because there are two kinds of epinephrin molecules, one of which is physiologically active and the other practically inactive—and yet both are correctly designated by the formula $C_9H_{13}NO_3$.

The physiologically active variety of epinephrin has the property of rotating the ray of polarized light in the polarimeter to the left and is therefore called “laevorotatory,” and the other—the less active kind—turns the light to the right; it is dextrorotatory.

Chemical tests can show only the quantity of epinephrin present in a given specimen, but cannot distinguish between the active and the inactive—the laevo and the dextro. For instance, a preparation composed of 40% dextro and 60% laevo would be only 60% active, but would register 100% on chemical test.

One of the unsolved chemical mysteries is the fact that

natural epinephrin (derived from suprarenal glands and other chromaffinic tissue) is all laevorotatory, whereas the epinephrin that is produced synthetically is 50% dextro and 50% laevo, though this ratio can be modified by subsequent chemical treatment, and synthetic preparations can be brought up to standard activity.

The original epinephrin preparation, Adrenalin, is of course the natural product. But we are not content with the assurance of activity which the manufacture of the natural product might be expected to give us; every batch of Adrenalin is subjected to physiological assay, the pressor test. This consists essentially of comparing the effect of the as yet untested specimen of Adrenalin on the blood pressure of an animal with the effect of a known 100% standard sample. Kymograph readings are carefully measured and by this means we are enabled to adjust every bottle of Adrenalin Solution to 100% physiological activity.



PARKE, DAVIS & COMPANY

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NO. 65

CONTENTS

EDITORIAL DEPARTMENT:

Charleston Meeting Great Success	479
Pediatric Society Has Good Meeting	479
Alumni Meeting of Medical College	503
Eye, Ear, Nose and Throat Men Organize	503
Woman's Auxiliary Organized	503
L. O. Mauldin, M. D.	480
Our Next President	481

(Contents continued on page ii.)

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ORIGINAL ARTICLES:

Mental Hygiene a Public Health Problem by C. F. Williams, M. D., Columbia, S. C.	482
Control of Malaria, the Medical Profession's Opportunity by C. C. Bass, M. D., New Orleans, La.	487
MINUTES	490
UROLOGY DEPARTMENT	496
SURGERY DEPARTMENT	498
SOCIETY REPORTS	499
OBSTETRICS AND GYNECOLOGY	501
CORRESPONDENCE	502

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The Journal

OF THE

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EDITORIAL

CHARLESTON MEETING GREAT SUCCESS

The seventy-fifth anniversary meeting was wonderfully successful from every point of view. The attendance was around the 300 mark, not the largest number ever recorded however, as the attendance was 330 two years ago at Columbia.

The interest in the Scientific program kept up until the gavel of adjournment fell late on the second day.

The Clinics were carried out in an admirable way by the local profession, and most of them well attended for early morning hours.

Evidently the hospitality of the City by the Sea has in no sense failed to satisfy, for all the allied societies had splendid programs and large numbers in attendance.

When the vote for the place of meeting for next year was reached by the House of Delegates, Orangeburg easily won out over all competitors.

We are confident that the time honored reputation of the "low country" for cordial hospitality to the stranger within her gates, will be sustained to the limit by the City on the Edisto in 1924.

PEDIATRIC SOCIETY HAS GOOD MEETING

The South Carolina Pediatric Society held a most interesting meeting at Charleston. The membership members about seventy-five now. Dr. S. G. Glover of Greenville was elected president.

This Society holds a mid-winter session in Columbia at which a scientific program second to none is scheduled.

(Continued on page 503)



L. O. MAULDIN, B. S., M. D., F. A. C. S.
President South Carolina Medical Association

Our New President

Dr. Leland Osgood Mauldin of Greenville, S. C. was born on May 10, 1878 at Pickens, S. C.

His father's name was Joab Mauldin and his mother before marriage was Deborah Reid Hollingsworth. These two families are of Scotch and English descent and are prominent in Upper South Carolina and other Southern States.

Dr. Mauldin received his early education in the common and High School near and at Pickens Court House and at Clemson College where he graduated with a B. S. Degree and afterwards attended the Medical College of the State of South Carolina where he graduated in medicine in April, 1903.

After graduating in medicine he did a general practice at his home at Pickens for fifteen months, when, he by civil service examination received an appointment as a Medical Examiner for the Bureau of Pensions in Washington, D. C. He held that appointment for one year and did Post Graduate work in the night schools of Washington, thereby laying the foundation for extensive study in the Eye, Ear, Nose and Throat Specialty.

After leaving Washington, he went to London, England where he did Post-Graduate work as a Junior Assistant in the Royal London Ophthalmic Hospital and as a Clinical Assistant in the London Central Ear and Throat Hospital. Having completed these courses in the London Hospitals, he went to Vienna, Austria and took some eye, ear, nose and throat courses in the Allgemeines Krankenhaus which, at that time, was a world famed hospital, a branch of the University of Vienna, and a mecca for English and American Medical students.

Dr. Mauldin returned to this country in 1906 and established himself in the City of

Greenville in September of that year where he has practiced the Eye, Ear, Nose and Throat Specialty ever since.

He has been a member of the South Carolina Medical Association since he graduated in medicine in 1903 and since he began active work in the state in 1906 he has directed his best efforts to his practice and to the advancement of the medical profession of the state through the instrumentality of the State Medical Association.

During the World War he was president of the Medical Advisory Board of the First District of South Carolina and directed an untold amount of energy in helping the government marshal its Man Power for the War.

He was elected Councillor for the Fourth District of the State Medical Association in 1918 and since 1920 has served as Chairman of that Board.

Besides being a member of the South Carolina Medical Association, he is a member of the A. M. A., the Tri-State Medical Association of Virginia and the Two Carolinas, the Southern Medical Association, the American Academy of Ophthalmology and Oto-Laryngology and has been a member of the American College of Surgeons since 1912.

He is a public spirited citizen of his community and is at present the president of the Staff of the Greenville City Hospital.

Among some of his excellent accomplishments through his experience in work, should be mentioned, the perfection of his individual method of tying off the bleeding vessels in the tonsil fossa by means of the fingers which he claims is nature's best instrument.

In September 1909 he married Miss Carrie Mason Floyd of Woodruff, S. C. They now have three children; viz., May Floyd, Ossie Floyd and Leland O. Mauldin, Jr.

ORIGINAL ARTICLES

MENTAL HYGIENE A PUBLIC HEALTH PROBLEM

By *C. F. Williams M. D., Columbia, S. C.*

Among the important achievements of the past none shine more brilliantly than those in the field of preventive medicine. Pasteur's dream would seem almost at hand and all honor to those who are rapidly bringing it about.

Through the efforts of those who have been and are engaged in this field—aided at all times by an unselfish profession—the nation, the state and society in general are beginning to understand and are assuming a more hopeful attitude towards preventive medicine. This attitude, however, until recent years has been one sided, taking into account only the physical aspects and almost totally ignoring the mental aspects of the problem. This has been due largely to the point of view of the internist and the psychiatrist with reference to their respective problems. Mercier has well presented the comparison, "When the student of medicine passes to the study of insanity, he crosses a scientific frontier, and enters an entirely new province of knowledge. Hitherto his purview has been limited to the processes that go on within the body and whatever references he had to make beyond that field were indirect and of secondary import. He needs to know the structure and functions of the several organs of the body, and, when any func-

tion is disordered, his calling is to take measures to readjust the bodily processes to one another so that they may work in harmony again. He has, in short, to maintain the organism in a fit state to do its work whatever that may be, but with the doing of the work he has no concern. What the work may be, and with what efficiency it may be performed, is no concern of his, except in so far as these things may effect the general capacity of the organism to continue its existence. His position towards the patient is the position of the shipwright and engineer towards the vessel of which they are engaged. Like them, he must be thoroughly acquainted with the structure and function of every part, and, like them, he must be upon the watch to repair the structure and correct the function, when the one is damaged or the other is at fault; but with the ship's course he has nothing to do. That is a matter altogether beyond his province. When the student oversteps the bounds of medicine to enter upon the study of insanity he leaves the engine-room for the quarter deck. He is no longer directly concerned with the integrity of the structure or the efficiency of the engines. His function now is to set the ship's course, to note the way in which she comports herself in wind and weather, to study charts and tides, stars and clouds, to watch the barometer and to sound the lead, and generally to relinquish the observation of the ship herself, and to take up that of her relation to the world in which she moves. This is the function of the student of insanity—to study the individual, not per se, or simplic-

ner, but in relation to the world in which he exists, and in which he has to maintain his existence."

This comparison sets forth admirably the two view points. However, as White has well said, "the two positions must not be considered as mutually exclusive. It is true that the navigator is not primarily interested in the condition of the machinery, yet if a breakdown occurs he cannot direct the ship. Similarly the engineer is not primarily interested in the course of the ship, yet if she goes upon the rocks his machinery may be hopelessly smashed. And so with the internist and the psychiatrist. The psychiatrist is not primarily interested in the condition of the several organs, yet an uremia will produce the most profound mental symptoms. The internist is not primarily interested in the mental adaptations, yet they may fail so hopelessly as to produce organic disease."

It is, therefore, obvious that the old idea that the mind and body are two distinct entities to be treated separately must give place to the new conception that the human being is a psycho-biological unit in which the psychic and physical elements are inter-dependent, reacting one upon the other with what we recognize as personality as the result.

As Haviland has well stated, "health implies harmonious adjustment, both physical and mental, hence no public health movement is complete that fails to embody provision for meeting the mental hygiene needs of the community." These needs are great and varied; for the problems involved are as complex as society itself. It is now well recognized that the problems of dependency, delinquency, industrial friction, destructive radicalism and many other isms cannot be solved without taking into account the mental factors involved. On account of failure to recognize these factors many individuals are called upon by society to meet conditions far beyond their best powers,

and by these demands society itself is producing some of the very problems it should be taking steps to prevent.

Viewed from no broader standpoint than that of dollars and cents the problems involved in mental hygiene demand the earnest thought of the best minds of the day. For the purpose of comparison the statistics for the period of time this organization has been in existence will be presented. At the time of the organization of this association, the seventy-fifth anniversary of which we are celebrating today, there were in the United States twenty six (26) institutions for the treatment of mental diseases. Today there are more than five hundred (500). The number of patients has increased from about three thousand (3,000) to over two hundred and thirty-five thousand (235,000); the annual number of admissions from about two thousand (2,000) to over seventy-five thousand (75,000), and their annual cost of maintenance and upkeep from a little over two hundred thousand dollars (\$200,000.) to about seventy-five million (\$75,000,000.); the amount invested in plants and equipment from about three million (\$3,000,000.) to over two hundred and fifty million dollars (\$250,000,000.).

In South Carolina for the same period the number of patients has increased from seventy-four (74) to over two thousand and five hundred (2,500); the number of admissions annually from thirty-three (33) to over one thousand (1,000); the annual cost of maintenance and upkeep from eleven thousand, seven hundred and twenty-eight dollars (\$11,728.) to about seven hundred thousand (\$700,000.) and the amount invested in plants and equipment from forty thousand (\$40,000.) to two and three-quarter millions of dollars (2,750,000.)

The number of beds for the treatment of mental diseases in the State is one-fourth more than the number in all hospitals for

the treatment of all other forms of illness.

While these figures will no doubt be amazing to many they by no means represent the total cost to the State. No accounting has been made of the time lost or the reduced earning capacity. Nor has there been added to these stupendous figures the cost of operating our courts and schools for those who become repeated offenders and for those who have to repeat their grades in school on account of mental diseases or deficiency. In both of these institutions—our courts and schools—much money is annually wasted because mental disorders are not recognized.

The chronic offender is as well known to the court officials as the chronic complainer to the medical profession and the reasons for their acts and complaints are alike misunderstood.

Complete studies of those repeating crimes show that the majority are retarded mentally, either feeble-minded, constitutional psychopaths, psychotic, psycho-neurotic or epileptic. Many of the offenders passing through our courts are transgressors against the laws of society not because of any meanness or wickedness, but because of their inability to measure up to or conform to the demands of society. Individuals, children or adults, possessing these abnormal mental trends, grown older, their handicaps remaining the same, while the complications of life become greater. If society neglects them, and does not provide the machinery for the early recognition and treatment of these individuals, we later find them in our courts, industrial schools, reformatories, prisons and in our almshouses—and the financial burden continues to increase.

Fortunately we have some fairly accurate statistics on the court phase of the problem. In 1921 a mental survey of the State was made by representatives of the National Committee for Mental Hygiene. This survey showed that 56 per cent of the

inmates of our county jails were handicapped with some form of mental trouble, 47.8 per cent were repeaters of crime. At the State prison 40 per cent were shown to be repeaters, while 64.2 per cent were abnormal in their mental make-up. These figures vary but little with similar institutions throughout the country and have a most practical bearing on crime and its treatment, for they show clearly the great need of the recognition of these facts by the courts so that proper action can be taken to prevent repetition.

No accurate statistics are available as to the cost of trying a felony in this State. However, after conferring with several court officials two hundred dollars (\$200.00) was agreed upon as approximately the correct amount necessary to prosecute each case. According to the report of the Attorney General for 1922, two thousand, seven hundred and fifty-nine (2,759) persons were convicted of crime.

Based upon the findings of the survey made by the National Committee for Mental Hygiene 60.1 per cent of this number were handicapped by mental disorders, 43.9 per cent or twelve hundred and eleven (1,211) have or will become repeaters of crime. Twelve hundred and eleven times (1,211) two hundred dollars (\$200.00) equals two hundred and forty-two thousand, two hundred dollars (\$242,200.) This represents the cost of the passing through our courts for the second time of persons who committed crimes. If their condition had been recognized at the time of the first offense and proper steps taken, this money would have been saved, and, far better, crime prevented. No estimate has been made of the cost of their maintenance while in the jails awaiting trial or for the period of their punishment or the loss from non productivity.

What is true of our courts is equally true of our schools. It has been ascertained that 2.8 per cent of the white children and

4.2 per cent of the colored are mental defectives. Applying this percentage to the total school enrollment in the State as given in the school directory for 1922 and 1923 there are in the public schools (15,833), fifteen thousand, eight hundred and thirty-three mental defective children—five thousand, five hundred and ninety-five (5,595) white and ten thousand, two hundred and thirty-eight (10,238) colored. Almost if not all of these children will sooner or later fail to make their grades and will be compelled to go over the same ground. It costs just as much to repeat a grade as to go over it in the first instance. The per capita expenditure per pupil for 1920 was nineteen dollars and ninety-nine cents (\$19.99). It will, therefore, be seen that the waste in the public schools each year from neglecting to make special provision for the detection and instruction of this type of pupil is at least one quarter of a million dollars.

While the economic side of the problem is stupendous and cannot be ignored, it is far out-weighted by the suffering, misery and unhappiness brought about, and these factors cannot be measured in terms of money. The economic and human aspects combined constitute one of the greatest issues confronting the State today, and if the State is to carry out one of its fundamental duties, that of maintaining itself and affording equal opportunities to its citizens, it must address itself to the task of formulating a wise and adequate policy regarding these matters. Too long have we been dealing with failures and too little have we taken steps to ascertain the causes and remove them. The history of the care and treatment of the insane shows very clearly that almost all of our efforts have been extended for their care where-as very little, if any, effort has been directed towards the prevention of these disorders. This custom of caring for the end-products of mental disturbances as

manifested in social mal adjustments and of doing almost nothing to remove the causes, permeates our methods of dealing with all social derelicts.

There is no question but that the increased demands made upon the treasury of our State for those who become mentally sick will always be willingly and cheerfully met by our people. While this is most commendable and praise-worthy and as it should be, those familiar with the problems in all their aspects are confronted with these questions—

Would it not be more humane and economical for the State to provide at the same time means whereby many of these individuals could be recognized early and at a time when proper treatment would prevent their becoming chronic mental sufferers and permanent wards of the State?

Shall it continue to be the policy of the State to maintain at a great expense a hospital at the foot of the cliff to take care of those who become injured by falling over rather than to build a fence at the top to prevent their falling?

Shall it continue to be the policy of the State to pass through our courts all those guilty of crime and not take steps to ascertain the reason?

Shall it continue to be the policy of the State through the public schools to maintain a standard for all alike and to turn aside as drift wood on society those who fail through no fault of their own?

These are questions which will be answered and answered correctly when the facts are clearly presented to the people and in the presentation lies a great challenge to the medical profession and particularly to those engaged in public health work.

I shall not attempt to point out a comprehensive program as to how these facts should be given to the people, but wish merely to suggest some measures which

would now seem most urgent, some of them being possibly immediately available.

In no abnormality is early recognition more important than in mental disease if the institution of proper treatment is to yield the best results. The family physician is, therefore the first aid and as so much depends upon him he must receive as a part of his medical course adequate teaching and clinical experience in psychiatry. There is need of clinical and research laboratories devoting their time to developing better methods of diagnosis and treatment and to the discovery of causes and their removal. There should be established in all general hospitals psychopathic departments or wards for the treatment of those in the early stages of their psychoses. Many of these can be cured and returned to society who if left alone to fight their own battles and make their own adjustments would fail and after a time be sent to the State Hospital to become permanent wards of the State. Mental clinics should be attached as a part of the psychopathic department and to the clinics for physical diseases already established. These would serve as reference centers for special examination and observation in the hospital if necessary. Attached to the clinics should be the social workers or public health nurses with sufficient psychiatric training to be able to obtain good histories, interpret social backgrounds, assist in removing perilous factors in the individual's environment and social relationship, give advice as to healthy mental habits and the nature and danger of unhealthy ones, visit and advise paroled patients and create a suitable environment for those who can be paroled. The treatment of mental diseases often means the remedying of environmental conditions.

Social mal adjustments and domestic conflicts are not infrequently the causes of mental breakdowns and a trained social worker can often remedy these conditions by assisting the family in creating the en-

vironment necessary to the patient's welfare. Advice to the patient's family or to those with whom he is in conflict as to the attitude which should be assumed toward him, often does more good than advice to the patient.

There should be added to the traveling clinics of our public health department experienced psychiatrists who understand these problems and who can consequently serve the demands of the individual as well as public and private organizations.

To the present machinery existing in the courts and in the various correctional and penal institutions there should be attached psychiatric clinics which can give to the proper authorities valuable aid in helping them better to understand the individuals coming under their charge. By this method many of the chronic repeaters could be recognized and more humanely and economically dealt with the first time they chanced to break the laws of society or to show anti-social tendencies.

The place where preventive measures are most productive through early recognition and proper treatment is in the public schools. It is well known, especially by those primarily interested in the public school problems, that although the public school curriculum is arranged for the normal, average child there is a very large proportion of children who vary so far from the average as to require special training. This constitutes one of the most important problems confronting school authorities today. These children cannot be taught by the ordinary methods used in the class room. Their ability to learn is very limited even under ideal conditions and unless especially trained they are sooner or later thrown into society incapable of earning a livelihood. It is primarily because of this fact that such a large proportion of our dependents and delinquents is made up of the feeble-minded class.

It should be remembered that we have

both good and bad feeble-minded just as we have good and bad individuals of normal intelligence. The percentage of bad mental defectives is very small and for this reason only a small proportion of them need institutional care. It is only when there is superimposed upon their mental deficiency abnormal personality traits such as viciousness or cruelty that they need special treatment and custodial care. Experience shows that many of them, after they have been tided over the disturbances of the adolescent period, can be turned back into the community as desirable members of it.

When the feeble-minded are not properly treated they are all potentially wards of the State and it depends upon their particular environment to some extent and to their personality make-up to a great extent just how serious a problem they become. It is especially important to remember that the vast majority of the feeble-minded become dependent and delinquent, not because of any inherent or anti-social tendencies on their part, but because of their neglect by society and because of their being deprived of the training they need.

At present there is no systematic method of locating these unusual children. The medical examination in the schools is for the purpose of detecting physical disorders and does not include mental examination. If we are to cope successfully with these more serious mental problems the present medical inspection of school children should be extended to include a thorough mental as well as physical examination. By this means not only will defective children be recognized, but also children in whom seeds of mental diseases have been sown and which are only just budding into unhealthy mental manifestations or temperamental traits.

Here again the public school offers the greatest opportunity. The teachers soon learn to recognize children of this type and can refer them to the school physician and

nurse for guidance in habit training. It is only by attacking the problem in this way and by understanding the special needs of the individuals and treating them accordingly that we can ever hope to improve our social order, eliminate a great deal of unnecessary waste and preserve to the State not only vast sums of money, but far better self supporting, self respecting and law abiding citizens.

The challenge is to the medical profession to take the lead.

CONTROL OF MALARIA, THE MEDICAL PROFESSION'S OPPORTUNITY

By C. C. Bass, M.D., The School of Medicine, Tulane University of Louisiana, New Orleans, La.

Malaria is carried from one person to another by Anopheline mosquitoes and in this way only. Barring experimental direct inoculation, no person ever gets malaria except the infection is carried to him by mosquitoes.

Mosquitoes have no malaria parasites in them and therefore they cannot infect persons with malaria unless and until they themselves become infected by first drawing blood from infected human beings.

Man gets malaria only from infected mosquitoes and mosquitoes get malaria only from infected man. When this statement is made, the question often is asked, "If this is true, where did the first malaria come from?" This is quite a natural question. I cannot answer it any more than I could tell you the origin of any other living thing. The malaria plasmodium is simply a microscopic living animal which is a parasite of man and Anopheline mosquitoes. These two, man and mosquitoes, are necessary hosts of the parasite. Without either, one or the other transmission of

malaria cannot occur. Malaria plasmodia cannot live and grow in any other animal except man nor can they live and grow in any other insect except certain species of mosquitoes.

any other insect except certain species of common knowledge and there is nothing new in them to you. They are stated here preliminary to statement of certain other facts to be brought to your attention later, which although equally true and of equal fundamental importance in relation to the spread of malaria, some of them may not be quite so well known and appreciated.

Let us refer for a moment to certain habits relative to biting and flight of the anopheline mosquitoes that transmit malaria. Anophelines are more or less wild species; they bite in the dark chiefly and the larval stage of their life is passed in suitable pools or collections of water, usually under cover of more or less dense vegetation of one kind or another. Swampy surroundings are most favorable.

The larval and pupal stages are passed in the water, after which follows emergence and flight. Within a day or two, when the female has reached the age or stage at which she should produce eggs, there develops a thirst for blood. She cannot develop eggs and therefore cannot propagate the species until she takes a meal of blood. If we hatch and keep anophelines in cages, they never develop any eggs as long as they receive no blood. Allow a single blood meal and eggs rapidly develop.

When this stage is reached in the female mosquito in nature when a blood meal is needed, she flies in one direction or another in search of it. Sooner or later she may reach a home where she bites any person whom she happens to find. You have no doubt observed how full she will fill. She then usually goes to a dark corner or dark place to rest and hide. As soon as the blood is partly digested she may feed again and perhaps again.

Soon, however, she has developed a batch of eggs. Whenever they develop sufficiently, the natural instinct of the insect is to go to a suitable place to deposit them. The tendency is for her to go back to the same place where her larval and pupal stage was successfully passed. She deposits her batch of eggs and perhaps remains near the breeding pool for a time, but she soon becomes thirsty for another blood meal. She does not now go aimlessly in one direction or another in search of blood, but the tendency at least is for her to go in the same direction and, in fact, to the same home where she fed previously. She draws blood and develops another batch of eggs which instinct directs her to deposit in a suitable place. The tendency is to go right back to the same location where she formerly deposited eggs and where she spent her larval and pupal stage successfully. Thus the same mosquito may pass back and forth several times during her life from the surroundings of the breeding ground or pool to the home where she gets the necessary blood meals to develop her eggs and reproduce, just as bees journey back and forth from their hive to a clover field or other source of honey or food, or ants from their nests to some food they have found.

If it should happen that the blood drawn by the anopheline the first time contains malaria plasmodia, she becomes infected. After a suitable period of incubation she becomes infectious and in the act of biting infects any person from whom she may draw blood subsequently. If she does not get infected herself, she cannot infect those whom she bites.

It is very apparent that a person who has malaria in a home is much more likely to be a source of infection to others living in the same home or at least in the same vicinity than to those living in other directions from the breeding place or any considerable distance from this home. It is also very plain that the larger the number of persons

in a home or in a vicinity who have malaria parasites in their blood, the larger the proportion of the mosquitoes in that home or vicinity that will become infected and transmit the infection to others.

Anything that reduces the number of anophelines in a given area reduces the amount of transmission of malaria. Likewise, anything that reduces the proportion of persons who have malaria in their blood which may be transmitted by the anophelines present, also reduces transmission correspondingly. Here is where the physician's opportunity and obligation comes in.

A physician is called to see a case of malaria. A few doses of quinine relieves the clinical symptoms. If treatment stops there, in due course of time there is a relapse. This may be relieved by treatment, again to be followed later by another relapse. During all this time, weeks and sometimes months, the patient is a malaria carrier and a potential source of infection to others, especially in his home or the vicinity thereof. This may go on and, in fact, does go on in the practice of many supposedly good, well informed and conscientious doctors of this country.

Malaria patients are discharged without receiving treatment or advice that could reasonably be expected to cure the infection and prevent relapse. What treatment is given for this purpose is often entirely inadequate and is given in a haphazard way and the advice as to the importance and necessity of proper treatment over sufficient period of time to cure the infection is given in an unimpressive way, to say the least of it. I believe it is the duty of a physician who treats a case of malaria not only to relieve him of the active symptoms, but also to cure the infection. If we all did this, malaria prevalence would rapidly decline in this country because there would be less and less of it to be transmitted by the mosquitoes that we will have in spite of all the

anti-mosquito work it is possible to do at the present time.

There is another place in which there is an opportunity and I believe obligation for practising physicians to contribute further to the reduction in malaria prevalence where they practice. Whenever there is one person with active symptoms of malaria in a home, frequently one or more others in the same home are infected but have milder or not recognized symptoms at the time. They, too, are malaria carriers and potential sources of infection to others. If such malaria carriers are overlooked, transmission may continue, however thorough the treatment may be in other cases. The physician should advise and carry out proper diagnosis and treatment of all malaria carriers in the home and not wait until they get sick enough to call him in for relief. Damage has already been done then and more than likely transmission to others has already occurred.

Just a word in regard to treatment, especially for the purpose of curing the infection, disinfecting the patient of malaria. No doubt you are all familiar with and I hope most of you follow the "Standard treatment" recommended by the National Malaria Committee and approved by the U. S. Public Health Service. It is as follows:

For the acute attack, 10 grains of quinine sulphate by mouth 3 times a day for a period of at least 3 or 4 days, to be followed by 10 grains every night before retiring for a period of 8 weeks. For infected persons not having acute symptoms at the time, only the 8 weeks' treatment is required.

The proportionate doses for children are: Under 1 year, 1-2 grain; 1 year, 1 grain; 2 years, 2 grains; 3 and 4 years, 3 grains; 5, 6 and 7 years, 4 grains; 8, 9 and 10 years, 6 grains; 11, 12, 13 and 14 years, 8 grains; 15 years or older, 10 grains.

So far as I know and believe, this method

of treatment relieves the symptoms, fever or chills and fever due to malaria, in one hundred per cent. of cases (of course excepting moribund cases) and it cures the infection in a very high per cent. of instances. There are exceptional cases in which a still longer period of treatment is necessary to disinfect. I do not believe there is any more effective and at the same time practical method of treatment known.

If the physicians of South Carolina and of this country would conscientiously employ the Standard Treatment for Malaria or other equally effective method of treatment, to the end that the infection would be cured and transmission thus prevented, in the cases they treat, and if they would go further and give proper advice, diagnosis and treatment to the malaria carriers in the homes in which they practice, malaria would soon be reduced to a negligible quantity. This would occur long before it will be possible to sanitize a suffi-

ciently large area of the country to eradicate the mosquitoes. In fact, malaria prevalence is rapidly reducing in this whole country due, no doubt, to a number of influences, not the least of which, I fancy, is the more effective treatment that is being employed by a rapidly increasing proportion of the physicians of the country. I hope this good work will increase until practically all people who consult physicians for malaria will get the treatment and advice they have a right to expect and the physician's duty demands—they should give.

There is no better opportunity for the medical profession to contribute to the health of the country and to perform the altruistic service this noble profession stands for. We should practice it and teach it in the medical schools, medical societies and elsewhere. Control of malaria now is the medical profession's opportunity. I believe I know what the answer will be.

MINUTES

MINUTES OF THE HOUSE OF DELEGATES SOUTH CAROLINA MEDICAL ASSO- CIATION 1923

The House of Delegates of the South Carolina Medical Association met at 8:15 p. m., April 17th, 1923, in the Banquet Hall of the Charleston Hotel, Charleston, S. C., being called to order by the President, Dr. C. F. Williams, of Columbia.

The Report of the Credentials Committee was received and a quorum declared present for the transaction of business.

Dr. E. A. Hines, Secretary-Treasurer, read his report and moved that a committee of three be appointed to consider this report and report back under the head of New Business. Motion seconded and carried. The President appointed on this committee:

Dr. W. P. Timmerman -----Batesburg
Dr. B. F. Sloan -----Walhalla
Dr. C. W. Kollock -----Charleston

Dr. L. O. Mauldin, Greenville, read the Report of Councillors. This report was received, and the resolution offered by Dr. Harmon referred to the Committee on Public Policy and Legislation for consideration, to be reported back to the House under the head of New Business.

REPORT OF SECRETARY-TREASURER FOR 1922

Edgar A. Hines, M. D., Seneca, S. C.

It is fitting that on this Seventy-fifth Anniversary we pause for a moment and recall the names of some of the men who have rendered this Association conspicuous service as Secretaries and Treasurers. The first Secretaries elected in 1848 were Dr. D. J. C. Cain of Charleston and Dr. R. B. Johnson of Camden. At the re-organization in 1869 the following men were elected Recording and Corresponding Secretaries respectively; Dr. J. S. Buist and Dr. F. P.

Porcher, both of Charleston. Subsequently until 1904 the following men served as Recording Secretaries; J. S. Buist, J. L. Dawson, Mazyek P. Ravenel, Edward F. Parker, A. J. Buist, Wm. Weston and A. B. Knowlton. Recording Secretaries from 1869 to date; Henry D. Fraser, A. S. Hydrick, John Forest, W. P. Porcher, T. P. Whaley, Walter Cheyne and the present incumbent.

The Treasurer's office prior to merging it with the Secretaries office, some ten years ago, was filled by able men; notably F. L. Parker, T. Grange Simons, H. W. DeSausure, B. E. Baker, C. V. Rees and C. P. Aimar.

The Association is to be congratulated that several of these distinguished men are present at this meeting and that one of them, who rendered long and faithful service in many other capacities, is a member of this house of delegates—Dr. T. Grange Simons of Charleston. Dr. Simons was elected Recording Secretary in 1871, fifty-two years ago, and doubtless was present at the reorganization in 1869.

The membership on December 31, 1922, was 701, a slight decrease over the previous year. Thirty-six County Societies reported. Columbia led with 93 members, Greenville 72 and Charleston 71.

The Campaign for new members by the American Medical Association co-operating with the officers of this Association resulted in securing 34 applications for membership. When these shall have been duly elected the membership of the State Association will exceed the previous year. It is gratifying to report an increase of scientific interest especially in the district Societies.

As your representative, I have been honored by other organizations in the past year: I was elected the first president of the Association of Secretaries, Presidents and Health Officers of the sixteen Southern States comprising the Southern Medical Association. I was selected as a member of the Committee on Scientific awards of the Southern Medical Association and within the week invited to become a contributing editor to the Southern Medical Journal.

At the conference of Secretaries of the State Medical Associations held in Chicago in November, I was elected by that body to represent the Southern Section of the United States in

preparing a Periodic Health Examination blank, which when adopted will be presented to the constituent county Societies for general use. This should prove to be one of the greatest steps forward in preventive medicine for a generation (Exhibit blanks).

This occasion gives an unusual opportunity to mark an epoch of progress in this Society. At the fiftieth anniversary held in this city twenty-five years ago Dr. W. P. Porcher, president at that time, presented the combined wisdom elicited from 3,000 letters sent to the members and other well wishers of the South Carolina Medical Association in regard to the ways and means of increasing the interest and membership. From the inspiration of that Semi-centennial came the Journal of the South Carolina Medical Association though not until 1905.

To assure us that the Seventy-fifth Anniversary shall go down in history as a great and lasting memory, I recommend that a committee of five be appointed by the President to completely revise our constitution and by-laws. This has not been done since its adoption, nineteen years ago.

Nearly all the states have found this necessary. The American Medical Association completely revised its constitution and by-laws in 1920, and has a commission now at work revising the model constitution and by-laws for all the states. The committee should be empowered to suggest ways and means of making this Association a greater factor in the welfare of the citizens of South Carolina.

Only the associations of two other states occupy such a fortunate position with reference to their Public Health laws, namely Alabama and Kentucky. In fulfilling their duties the committee shall be empowered to study the constitutions and by-laws of every state in the union and the public health laws as well.

These recommendations are in lieu of the changes in the constitution and by-laws suggested by this office one year ago.

I ask your approval of the new organization authorized by the American Medical Association, namely: The Woman's Auxiliary of the South Carolina Medical Association.

In conclusion: I am profoundly grateful to the president and the other officers of this Association and especially to the profession

of the City of Charleston for their cordial co-operation in the consummation of our plans for the celebration of our Seventy-fifth Anniversary.

REPORT OF CHAIRMAN OF COUNCIL- LORS

By L. O. Mauldin, Greenville, S. C.

Mr. President and Gentlemen of the House of Delegates:

The boll-weevil is still lusty and the different cults are still working in the state with utter disregard of ethics and in some instances with disregard of law, but the true medical profession has pursued the even tenor of its way and is making harmonious progress along all lines of medicine and surgery and the wolf has not come to the door of any member of this association.

There are now 701 members of The South Carolina Medical Association and most of this membership is in accord with those things which tend to the highest attainments of and the welfare of the Medical Profession of the whole state.

Council wishes to commend the Committee on Public Policy and Legislation for its untiring efforts in watching the interest of this association at the last meeting of the Legislature, it wishes also to commend those individual members of this association who worked individually and collectively and with effective ability to support this committee. It wishes also to laud the work of every member of this association who was in the legislature and worked for the best interest of the Medical Profession and the Public Health of the State.

This council urges that each member of the House of Delegates take back to his county society a request from the State Medical Association that all members keep in touch with their respective representatives in the legislature and keep said representatives well informed on the things that tend to the best aims and ends of the South Carolina Medical Association and for the best health of the people of the state.

The Journal, the official organ of this association, has made considerable improvement in some of its departments since last year. We thank those who have edited the different departments for the work they have done. It has been the policy of this coun-

cil to distribute the honors and experience of departmental editorship from year to year among capable members of the profession in the association for in this way we believe that more interest can be maintained in the work and qualifications of the Journal.

The tone of the reading matter and the advertising matter of the journal has been in keeping with the requirements of ethical Medical Journalism and at the same time the cost of running same, as can be seen by a reference to the Secretary-Editor's report, has been kept reasonably low. Council desires to commend the Secretary-Editor for his praiseworthy work in the interest of progressive medicine and for his excellent business management.

Seneca, S. C., April 14, 1923.

Dr. E. A. Hines, Secty.-Treas. South Carolina Medical Association,
Seneca, S. C.

Dear Sir:

In accordance with your instructions, I have audited the books and accounts of South Carolina Medical Association and attach hereto statement, made in the form of your annual report to the Association, which exhibits the receipts and disbursements for the year ending Dec. 31, 1922. Also a statement of the Assets of the Association there being no liabilities.

Respectfully,

Sydney Bruce, Auditor.

REPORT OF SOUTH CAROLINA MEDICAL ASSOCIATION 1922

Receipts:

Balance Jan. 1st, 1922	\$ 255.98
Membership Dues	2,163.00
Journal	\$2,045.07

Disbursements:

Salaries	\$1,708.50
Office Expense	94.50
Stamps	19.00
Traveling Expenses Sec. Editor	93.01
Miscellaneous	252.49
Balance in Seneca Bank Dec. 31, 1922	251.48
	\$2,418.98

Statement of Assets:

Cash in Bank -----	\$ 251.48
Office Furniture & Fixtures -----	220.00
Simms Memorial Fund -----	77.98
	\$ 549.46

Seneca, S. C., April 14, 1923.

Dr. E. A. Hines, Editor Journal S. C. Medical Association,

Seneca, S. C.

Dear Sir:

In accordance with your instructions, I have audited the books and accounts of the Journal of the South Carolina Medical Association, and attach hereto statement made in the form of your annual report to the Association, which exhibits the receipts and disbursements for the year ending December 31, 1922.

Respectfully,

Sydney Bruce, Auditor.

Receipts:

Balance January 1, 1922 -----	\$ 991.97
Subscriptions -----	1,454.00
Advertising -----	1,772.38
Interest on Certificate -----	60.00
Sundries -----	5.00
	\$4,283.35

Disbursements:

Salaries -----	\$ 821.70
Printing -----	1,886.91
Office Rent -----	120.00
Office Expense -----	116.10
Traveling Expense Secty. -----	220.92
Miscellaneous Items -----	72.65
Cash in Bank Dec. 31, 1922 -----	1,045.07
	\$4,283.35

Statement of Assets Journal S. C. Medical Association Dec. 31, 1922:

Cash in Bank Dec. 31, 1922 -----	\$1,045.07
Time Certificate in Seneca Bank --	1000.00
Journal S. C. Medical Assn.-----	2,045.07
Total Assets for South Carolina Medical Association and Journal	
Medical Association Dec. 31, 1922--	549.46
Journal S. C. Med. Asso.-----	2,045.07
	\$2,594.53

ITEMIZED STATEMENT OF SUBSCRIBERS BY COUNTIES DEC. 31, 1922

Aiken -----	2
Allendale -----	5
Abbeville -----	6
Anderson -----	39
Barnwell -----	8
Bamberg -----	13
Columbia -----	93
Charleston (1 Honorary) -----	71
Colleton -----	10
Chester (1 Honorary) -----	15
Chesterfield -----	8
Calhoun -----	5
Clarendon -----	9
Cherokee -----	9
Dillon -----	10
Darlington -----	15
Fairfield -----	7
Florence -----	22
Greenwood -----	20
Greenville (1 Honorary) -----	72
Georgetown -----	6
Horry -----	8
Kershaw -----	10
Lexington -----	8
Laurens -----	21
Marion -----	6
Marlboro -----	10
Newberry -----	22
Orangeburg (1 Honorary) -----	25
Oconee -----	13
Pickens -----	23
Sumter -----	23
Spartanburg -----	41
Union -----	10
Williamsburg -----	12
York -----	25
Total -----	697

(To be continued)

**MINUTES OF SCIENTIFIC SESSION
Charleston, S. C.****SOUTH CAROLINA MEDICAL ASSOCIATION 1923**

The Seventy-fifth Session of the South Carolina Medical Association was held in the Charleston Hotel, Charleston, April 17th, 18th and 19th, 1923. The first scientific session was called to order at ten o'clock, April 18th, by the President, Dr. C. F. Williams of Columbia. The Invocation was pronounced by Dr. G. A. Nickles, Pastor of the Westminster Presbyterian Church.

O Lord, our Heavenly Father, we thank Thee for the privilege of assembling here this morning to praise Thy good and holy Name, Thou Creator of the Universe. We recognize that our human eyes cannot always see ahead of us, that our finite minds cannot always know what is best and wise to do, and our strength is not always equal to the task. But we thank Thee for the privilege of coming to Thee for strength for the day. Endow us with Divine wisdom and guide and direct us, that we may know and do that which is right. Consecrate this hour of fellowship together, unite us with a common bond of sympathy and service for our fellowman. Give us strength for service through these days and through life, for the betterment of our fellowmen and to the glory of Thy Great Name. Guide and direct us through life, and we shall give Thee praise, world without end. Amen.

THE PRESIDENT: It is always a great pleasure to come to Charleston, and particularly on an occasion of this kind. We are fortunate this morning in having with us the Mayor of Charleston, Hon. John P. Grace, who will give us a welcome. It is indeed a great pleasure to present to you Mayor Grace. (Applause)

MAYOR JOHN P. GRACE: Mr. President, Ladies and Gentlemen: I can assure you that, much as may be your pleasure in coming to Charleston, it is a greater pleasure to have you with us. The city of Charleston is an old, and as we believe, a very venerable and hospitable community. We feel that we are not unduly proud when we say that everyone who comes here as a stranger goes away as a friend and lover of the old city. It is our pleasure to make you all feel so.

The medical profession is particularly welcome to Charleston. Charleston is one of the places which has given much to the medical history of this nation in its early and formulative days, and we feel that there is a bond of friendship and a tie, a very deep attachment between especially the medical profession of South Carolina and Charleston. Many of you no doubt during your student days were a part of our life. You know us as well as we know ourselves, and you know how we feel towards you. Personally, I have a very great friendship and attachment for the profession. My

friends in the profession, especially my own surgeon and those doctors who are close to me and to my family, very often hear me in a facetious way criticize what I tell them is the 'ignorance' of the medical profession, laughing at their inability to cope with those mysterious diseases which baffle human understanding. But nobody knows and appreciates better than I the profound wisdom and scholarship and research that has made the medical profession the master of most of the diseases which afflict mankind. And if there is still a realm of ignorance, a zone into which as yet their great minds have not been able to penetrate, I assure you that in my judgment that zone is being limited more and more, and it is only a little while when the diseases which now confound the medical profession will be absolutely explained.

We are accustomed to treat our guests with better weather than we have today. I do not know why the gentlemen who arranged this program have given you such liquid weather. It may be because of the absence of the other form of liquid that must have been here in the old days when you went to school here, and that you cannot find now. But we have nothing to do with that. Officially, I did not make this weather. Officially, this city is dry. But if in the laboratories, or in the chemical work of those wizards of the medical profession there happens to remain some spot which is equal to the weather we see on the outside today, I can say this to you—that as the doctors have cared for me when I was unable to take care of myself, I will take care of the doctors under the same circumstances. In that spirit of the glorious past—in that spirit, I welcome you to the City of Charleston. (Applause)

Dr. A. J. Buist, President of the Charleston Medical Society, welcomed on behalf of the Medical Society of South Carolina.

ADDRESS OF WELCOME

By **A. J. Buist, M. D., Charleston, S. C.,**
President South Carolina Medical Society, (Charleston County)

Mr. President and Fellow Members of the South Carolina Medical Association:

Seventy-five years is but as a few days in the making of history, but in the life of man the time is sufficiently long to have taken

to their great reward all those who had a hand in the creation of this association.

It was in the year 1847 that the Medical Society of South Carolina had among its members such men as Dr. Deas, the President, Dr. Wragg, Dr. Prioleau, Dr. DeSaussure, Dr. Moultrie, Dr. Ravenel and others whose names are still recalled with veneration and respect and whose teachings did much to make Charleston the then medical center of the State and whose influence has been felt throughout the whole of the commonwealth.

These men feeling that "one uniform plan of organization of the Medical Profession should exist throughout the State, the better to advance those objects in which we all feel a common interest", decided in the year 1847 to call a convention of the physicians of the State to be held in Charleston in the early part of the year 1848 for the purpose of forming the South Carolina Medical Association. In the minutes of the Medical Society of South Carolina, of February 1st, 1848 we read that a committee was formed to welcome the guests and that specific instructions were given for the temporary and permanent organization of the convention. At this convention birth was given to the South Carolina Medical Association and we are meeting here today in the city of its nativity to celebrate the seventy-fifth anniversary of that event. May we not say, then, that the Society that welcomes you here today was the creator and parent of this Association and that it looks with pride and contentment upon the child of its creation?

Again referring to the minutes of the Medical Society of South Carolina, of June 1st, 1849, we find that this society was not satisfied with what it had done, but viewing even then with pride its offspring, desired to become but one of its limbs, as is shown by a resolution introduced at that meeting by Dr. DeSaussure, to wit: "Whereas it is desirable that one uniform plan of organization of the Medical Profession should exist throughout the State the better to advance those objects in which we all feel a common interest; and whereas the call for the medical convention which resulted in the formation of the South Carolina Medical Association emanated from this body in the belief that the cause of medical science and of the medical profession would be advanced by

a general association of the practitioners of this State; be it Resolved, that application be made by the President of this Society to the councillors of the South Carolina Medical Association requesting its admission as a district society." This request was duly granted and thus the Medical Society of South Carolina became the child of the thing of its creation and so it has remained throughout these many years. We are glad of that relationship and proud to acknowledge our fealty to you, Mr. President.

But it is not as an historian that I am appearing before you today. I am here in another role, as the representative of the Medical Society of South Carolina to welcome you to Charleston. These few historical facts are but to remind you that in coming to Charleston on this your seventy-fifth anniversary you are but coming home. It is that feeling that we wish to instill into each and every one of you. We wish you to feel at home, to feel that our services are at your beck and call, to feel that our hearts and homes are open to all of you and that you are most welcome. We wish for you all a most gladsome time, a most successful meeting, and when it is over we will wish for you all Godspeed on your journies home.

DR. J. H. TAYLOR (Columbia) I do not think Doctor Williams could have chosen a better one to come here and respond to an address of welcome to Charleston, for the reason that my mother was a Charlestonian, and one of the first words I learned was "the city". I do not know how many of you know what that means.

A wonderful welcome has been extended to us by the Honorable Mayor and by Doctor Ruist. It is typical of Charleston, with its culture and refinement and with everything that brings out the best in us, and if anyone can come to Charleston and not see the real beauty and charm of everything here—I confess I feel a sense of pity for that man.

Charleston has had a wonderful past, and has a wonderful present. I wonder how many of you keep up with the modern renaissance in literary effort in Charleston. We doctors are rather apt to think only of our own little corner and devote very little time to cultivating our aesthetic sense and reading to keep up with what is going on around us. I wonder how many of we up-country doctors have read "Master Skylark",

that wonderful story of the days of Shakespeare that is setting London on fire? That was written by a Charleston man. We have a productive atmosphere here in Charleston. It was said at the beginning of the last century that there was more scientific work being done in Charleston than in any other part of America, and so we have it today. John Bennett I have just mentioned. Herbert Sass writes essays for the Atlantic Monthly on Wild Life in the City Garden. It is said we get out of Rome what we take there, and we have to return to Charleston to properly appreciate it. I thank God I am half a Charlestonian.

THE PRESIDENT: There is one feature

of the welcome that I would like to mention. Invitations have been extended through the journals of the country to all South Carolina doctors, wherever they may be, to attend this meeting. There may be some of them here today that the officers have not met and do not know, and we extend them a very cordial welcome and we want them to feel at liberty to participate in the meeting. It will be a joy and pleasure to all of us if they will let us know they are here.

The President then delivered his address entitled "Mental Hygiene a Public Health Problem."

This address published elsewhere in this issue.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

MEROXYL

In Surgery, Gynecology and Obstetrics, April of this year, Dr. H. H. Young and associates of The Brady Urological Institute, Johns Hopkins Hospital, announced to the profession meroxyl, a new drug of high germicidal value. They have been carrying on clinical and experimental work with this drug for two years and in the light of such work feel justified in claiming for it a great field of usefulness among the local antiseptics.

Those who have visited "The Brady" within the last two years may recall that there was in use in the clinic this drug, bearing the laboratory number "253". In 1919, another germicide was given out from this department of The Johns Hopkins Hospital. It was "mercurochrome" or "220". Mercurochrome has powerful bactericidal qualities but is objectionable only on account of its intense staining of everything that it comes in contact with. On account of the staining property of mercurochrome in clinical practice, the originators undertook to find a substitute, eliminating

that objection. Meroxyl has been produced as a result of the work.

It has been found that meroxyl is not a substitute for mercurochrome but an adjunct. Meroxyl has a greater germicidal activity than mercurochrome but it does not penetrate the tissues as does the latter. It has a little higher toxicity but in judicious use that is a quite negligible factor. Meroxyl does not stain which is a very desirable quality. It is very potent in the presence of serum and urine and therein possesses advantages over many of the other common local antiseptics.

Meroxyl is flesh colored or pink powder and will keep indefinitely in such form. The solution deteriorates and it is held that solutions should not be used which are more than one week old. The drug is now on the market, conveniently put up in tablet form by Hynson, Westcott & Dunning, Baltimore. Each tablet contains 2.3 grains for making fresh solutions. It is readily soluble in water.

Young and his associates have carried out very comprehensive bacteriological tests

with meroxyl *in vitro*. Their studies have been in three media, 0.875 per cent sodium chloride solution, normal urine of PH 6.4, and 50 per cent dog serum. The first is taken to estimate the value of the drug in the absence of organic matter. The 50 per cent serum tests "are more rigid than in the average medium of action of the drug *in vivo*, and are the most unfavorable experimentally".

As a result of the laboratory tests which were made in the above media to ascertain the germicidal ability of meroxyl against bacillus coli and staphylococcus pyogenes-aureus, the authors conclude: "-----, the germicidal power of the drug for bacillus coli is very high, not only in salt solution, but equally so in urine and 50 per cent dog serum. It is, therefore, demonstrated that for these periods the germicidal power of the drug is not diminished in the presence of albumin or urine, a most important factor in the clinical use of antiseptics. This is not true of many other germicides."

Comparative tests *in vitro* with meroxyl and many of the commonly used antiseptics, namely, phenol, potassium permanganate, mercuric chloride, argyrol, protargol, silver nitrate, acriflavine, flumerin, mercurophen, and mercurochrome were made. This was done with all only in strength which could be injected into the urethra. The bacillus coli, staphylococcus aureus and gonococci were the organisms used. In estimating the bactericidal value of the drugs against bacillus coli, the authors state: "A survey of the columns giving the therapeutic factor for one minute in

serum shows that meroxyl is twenty-five times as effective as any other drug."

The tests made against the staphylococcus pyogenes-aureus showed results practically similar to those obtained in the case of the colon bacillus.

Tests made against the gonococcus showed that meroxyl had greater germicidal powers than the other drugs. Mercurochrome came next.

The writers discuss the use of meroxyl in the following conditions:

1. Irrigation of infected kidney pelvis.
2. Treatment of acute gonorrhea.
3. Prophylaxis of urinary infection.
4. Wet dressings for wounds.
5. Irrigation of infected wounds.
6. Treatment of chronic cystitis.
7. Treatment of post-operative cystitis.

The use in other specialties is also taken up, such as otolaryngology and ophthalmology. For detailed information for the clinical use of the drug, reference may be made to the publication mentioned at the beginning of this article.

It can hardly be doubted that there is in meroxyl a drug of distinct value not only in urology but also in general surgery. Like practically all other drugs it has its limitations. Its application in clinical work should be judiciously made, bearing in mind that it does not replace other local antiseptics but is a most valuable complement. The urologist probably has in it a very efficient drug for the prevention of infection following instrumentation and operation on the urinary tract.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

REMARKS ON THE PRE-OPERATIVE JAUNDICE PATIENT

The cause of death in many of the operative patients with obstructed jaundice, is post operative intra-abdominal hemorrhage. One realizes that hepatic and renal insufficiency produce a certain number of deaths, but statistics show that over one-half of the deaths are alone due to hemorrhages.

Death from hemorrhages usually occur during the first post-operative week and this goes to show that the bleeding is not from severed arteries but is a more or less oozing from traumatic surfaces. Should the bleeding have been due to failure to ligate the cystic artery, death would have been within a few hours. One should, therefore, handle the tissue as little as possible and guard against leaving a raw liver surface, by not removing the gall bladder in primary operation for obstructed jaundice.

It is this scare of hemorrhages that has led surgeons to try to find some method to prepare jaundice patients for operation. For years some have known that hemorrhage spots on the patients is a fatal warning if operation is undertaken and others realize that the presence of jaundice from two to three weeks with toxic symptoms, dryness of the tissues, loss of weight, and a high coagulation time are bad omens if surgery is contemplated. The safest time to operate on jaundice patients is within the first forty-eight hours from the onset of jaundice.

It is only within the past few months that we have learned the proper pre-operative treatment of jaundice patients. For years the transfusion of blood has been

given to lower the coagulation time with more or less success, but there are cases that bleed in spite of transfusion in which the administration of calcium chloride intravenously checks the hemorrhage.

Vincent and Lee have shown that when the calcium time is lower than the coagulation of blood that the coagulation time in most instances can be lowered to approximate the calcium time by the administration of calcium salts. Other observers (King, etc.) believe that calcium decreases the toxicity in patients with obstructed jaundice. As calcium salts reduces the coagulation time as well as toxicity of the patient, does it not seem that this is the best method for pre-operative treatment of jaundice patients? The best preparation to be given intravenously is solution of calcium chloride, usually the amount being 5 cc. of a ten per cent solution daily for three days. This is usually a sufficient amount to permit operation in safety, though the coagulation and calcium time should be taken the morning of operation and if not normal more calcium should be given. Should bleeding occur after operation, give more calcium and if not checked give a transfusion of blood.

Walters has proven that fairly large amounts of calcium salts may be given without bad effects. Calcium lactate should be given by the mouth in large doses preliminary to operation for it aids some in a reduction of high coagulation time, but it has no influence on the blood calcium and it will not diminish the toxicity of the patient.

From Mann's experiments we have learned that carbohydrates and glucose solution prevents disintegration of the body

proteins when the patient is in coma and this has led us to prescribe this to jaundice patients both pre- and post- operatively.

Realizing that we have at last found some method of preparing jaundice patients for more or less safe operation has enabled us to lower our mortality record.

SOCIETY REPORTS

DARLINGTON COUNTY MEDICAL SOCIETY

The Darlington County Medical Society held an interesting meeting March 25th, Dr. A. D. Gregg, President, in the chair. Roll call was responded to by 17 of the 19 members enrolled.

Minutes were read and approved.

General discussion on Legislative matters followed, also as to the cut the Darlington County Health Unit sustained at the hands of the recent meeting of the Legislature.

A member of the Legislature was a guest of the Society at this time.

Officers for 1923 are as follows:

Dr. O. A. Alexander -----President

Dr. W. L. Byerley----Vice-President

Dr. J. T. Coggshall -----Secretary

Dr. J. W. Willcox -----Treasurer

GREENWOOD COUNTY MEDICAL SOCIETY MEETING

Dr. Jno. F. Simmons, President, presided over the meeting on May 7th.

Eleven members were present.

Two papers of interest were presented, "The Endocrines" by Dr. C. H. Workman; and "Club Foot" by Dr. J. B. Workman. The first paper was discussed by Dr. J. L. Marshall and the second by Dr. G. P. Neel.

Dr. Neel reported a case with mass in abdomen which proved to be cancer of the colon. The case was operated upon and made a complete recovery. This case was of interest from a diagnostic standpoint, and also as to results of treatment.

Dr. Page reported an interesting case of placenta previa, which was delivered and did well for about five days. Developed a temperature on the 5th day, partial hemiplegia on the 8th, cleared up to some extent on the 9th, and developed a complete hemiplegia on the 10th day. Condition evidently due to an embolus. At present there is a tendency toward improvement in the lower extremity only.

Dr. Turner cited a similar case occurring about five years ago.

The local chiropractor, who is neither licensed nor registered in the County, was discussed, and resolutions were passed to have the Board of Censors decide upon some course through which he may be required to comply with the law of this State.

A. D. Burnett,
Sec. G'wood Co. Med. Soc.

RESOLUTIONS ON DEATH OF DR. R. B. EPTING

On February 18th, 1923 whereas, an All-wise Providence removed from the walks of life to that better kingdom, one of our loyal, faithful and generous members, Dr. R. B. Epting.

A few years after graduating from the University of Maryland, Dr. Epting located in Greenwood for the practice of his profession. For a number of years he was local surgeon for the S. A. L. R. R., Trustee of Summerland College and Physician to Lander College, since removal of that Institution from Williamston.

He was a member of the Lutheran

Church, but also a worker and support of all causes of Christianity.

For more than thirty years of service he will ever be remembered as a Christian Gentleman and for his loyalty and generosity to all causes.

Be it Resolved:

First: That the Greenwood County Medical Society, in his death, is conscious of a loss which the Society has no adequate method of expressing.

He was one of the oldest members and this society will miss his wise counsel, but will cherish his memory and strive to emulate his virtues.

Second: We feel that not only the society is much the poorer for his passing, but that the community at large will miss him sorely, and a host of warm and loyal friends among his Professional Clientele will sadly mourn his death.

Third: That our heart-felt sympathy be extended to the bereaved family and that they be assured that we share this loss with them.

Fourth: That these resolutions be spread upon the minutes of the Session, a

copy sent the family, a copy sent the State Medical Journal and a copy given the Index-Journal for publication.

Signed,

J. L. Marshall,

J. M. Symmes,

S. W. Page,

Committee.

ALLENDALE COUNTY MEDICAL SOCIETY

Allendale County Medical Society met at the usual time and place, the President, W. J. E. Warnock, presiding.

The minutes read and approved.

No papers were read at this meeting, but a very interesting case was reported which was discussed informally and freely by those present.

Dr. L. A. Hartzog, Councillor of the eighth district, was present and made us a good talk, and at the conclusion of his remarks he spoke very complimentary of our society.

G. W. J. Loadholt, Secty.

Fairfax, S. C.

April 12, 1923.

OBSTETRICS AND GYNECOLOGY

R. E. SEIBELS, M. D., Columbia, S. C.

MATERNAL MORTALITY AGAIN

In a study of the last 10,000 parturient women admitted to the Chicago Lying-In Hospital, there were 39 deaths. This rate of 3.9 per thousand may be compared with 9 per thousand for South Carolina in 1921. "The hospital is an open one", says the report, "and over 300 different doctors send patients to it." Hence we may not say their low mortality is due to the skill of one particular man. The cases are unselected; simply a large number analyzed and reported upon.

Our rate must be lowered.

J. P. Greenhill. S. G. O. 1922, XXXV., 614.

THE PHYSIOLOGY OF MENSTRUATION

The public generally regards menstruation as a depleting experience. Not infrequently the physician is tempted to share the common error and regard its phenomena as a "sickness". Many women can be taught not to regard it as a time of invalidism and thus be saved much of the distress of which they complain by sensible advice and by the discontinuance of

the use of "medicine" at that time.—formulae which are seldom beneficial often entirely useless, and not infrequently even noxious. Perhaps the saving grace of Christian Science and certainly much of its appeal to women, lies in the fact that it teaches them to regard the disturbances incident to menstruation as errors of the mind. For probably eighty per cent of women have the habit of laying aside their activities at this time and fewer than ten per cent of the unmarried have any reason to do so. Tyler and Underhill undertook the study of the blood concentration before, during and after menstruation in normal women. By the Cohen-Smith method, the hemoglobin was found to show no variation characteristic of any one phase of the cycle. This obtained likewise in two patients with very free bleeding, but no pain, and in three cases studied which suffered from severe dysmenorrhea. Wittshire is quoted as having demonstrated that fatigue from measured work is as quickly recovered from as at other times. The basal metabolism has recently been shown to be normal at this time.

Margaret Tyler and Frank P. Underhill: Am. J. Ob. & Gyn. 1923, Vol. V., 155.

CORRESPONDENCE

May 29, 1923.

Dr. E. A. Hines, Editor,

Journal South Carolina Medical Assn.,
Seneca, S. C.

Dear Doctor:

During May, the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Connaught Antitoxin Laboratories

Insulin-Toronto

Insulin-Toronto—5 c. c. vials, 5 units in units each cubic centimeter.

Insulin-Toronto—5 c. c. vials, 10 units in each cubic centimeter.

Mallinckrodt Chemical Works

Arsphenamine-Mallinckrodt

Arsphenamine-Mallinckrodt Ampoules,

0.1 Gm.

Arsphenamine-Mallinckrodt Ampoules,

0.2 Gm.

Arsphenamine-Mallinckrodt Ampoules,

0.3 Gm.

Arsphenamine-Mallinckrodt Ampoules,

0.4 Gm.

Arsphenamine-Mallinckrodt Ampoules,

0.5 Gm.

Arsphenamine-Mallinckrodt Ampoules,

0.6 Gm.

Arsphenamine-Mallinckrodt Ampoules,

1.0 Gm.

Barbital-M. C. W.

Cincophen-M. C. W.

Mercuric Cyanide-M. C. W.

Quinine Ethylcarbonate-M. C. W.

Parke, Davis & Co.

Pollen Extract Ragweed-P. D. & Co.

Pollen Extract Timothy-P. D. & Co.

Nonproprietary Article

Insulin

Yours truly,

W. A. Puckner, Secretary,

Council on Pharmacy and Chemistry.

Mr. Editor:

At the very instructive and enjoyable meeting of the South Carolina Medical Association in Charleston in April, the subject of combatting the "Quack" evil in the State was discussed for a few minutes only, and on account of its importance to the Public Health of the State I believe that it is the duty of our association to start some concrete program by which we can educate the masses of the people in regard to the danger which arises when the Legislature attempts to license a bunch of quacks to examine more quacks who are then legally authorized to go out among the people and spread the doctrine that all disease is caused by a dislocated back-bone, or some such other foolishness.

Take for instance the Chiros—they claim that diagnosis as the regular Medical man practices it, is a farce. They claim that while we are taking specimens etc., and losing time generally, they just adjust the spinal column and the patient is well, irrespective of whatever the trouble may be, be it Diphtheria, Typhoid, Malaria, Dysentery, or what not.

Now, Mr. Editor, the tax payer contributes around \$200,000 for the State Board of Health for the purpose of the betterment of the health of the State by distributing vaccine—Health Lectures—Sanitation—Inspection, etc., and also to be ready in case of epidemics, and to keep records of the general health conditions of the State.

The quickest was to check an epidemic is to put a strict quarantine on the first cases. If that be so, and we know it to be true, then how can the State Board do its duty if we have a legalized band of "Fakers" practicing, who claim it's a farce to even take time to diagnose a case—if your back-bone is all right in line why there can be no epidemic.

Then again how about keeping statistics

for the State—although I do not think the present statistics amount to much.

It has been said there are three kinds of liars, viz.—ordinary liars, damn liars,—and *Statisticians*.

We were all amused at those three-hundred cases of malaria in the State last year with 1133 deaths from malaria.

Now, Mr. Editor, we are always wrong sometimes, and I may be wrong now, but any way I think that the checking of dangerous quackery in the State is just as much under the jurisdiction of the Executive Committee of the State Board of Health as the checking of epidemics,—one leads up to another.

I believe that the Medical men of the State should make the fight for the benefit of humanity, without consideration for

what the fakers, human parasites, and ignorant public may claim.

In time we will win out, "Truth crushed to earth etc." is with us. I think that the Executive Committee of the State Board of Health should get out instructive literature which should broadcast over the State, and so inform the people of the dangers of backing up quackery.

The Canadian Government went into the matter carefully, and their finding was that no law could be drawn that would do away with the danger incurred by licensing a lot of men who claim that it is folly to lose time diagnosing disease. The finding as a whole of the committee that investigated medical practice in Canada was absolutely condemnatory of the Chiropractic claims.

E. Harry Barnwell.

Martins Point, S. C.

EDITORIALS

(Continued from page 479)

EYE, EAR, NOSE AND THROAT MEN ORGANIZE

During the Charleston meeting the physicians of the State limiting their practice to eye, ear, nose and throat formed a special society somewhat along the lines of the S. C. Pediatric Society. Dr. C. W. Kollock of Charleston was elected president and the society will meet at the same time as the State Medical Association.

WOMAN'S AUXILIARY ORGANIZED

Under the leadership of Mrs. W. P. Cornell, of Columbia, chairman, the Woman's Auxiliary of the State Medical Association has been organized.

Mrs. R. S. Cathcart, of Charleston, was elected president, Mrs. J. S. Rhame of Charleston, Secretary.

There are but two objects, first—to promote preventive medicine in every County in the State,—Second, to promote social

intercourse between physicians and their families.

Only the wives of physicians are eligible to membership. As rapidly as possible the entire State will be organized.

ALUMNI MEETING OF MEDICAL COLLEGE

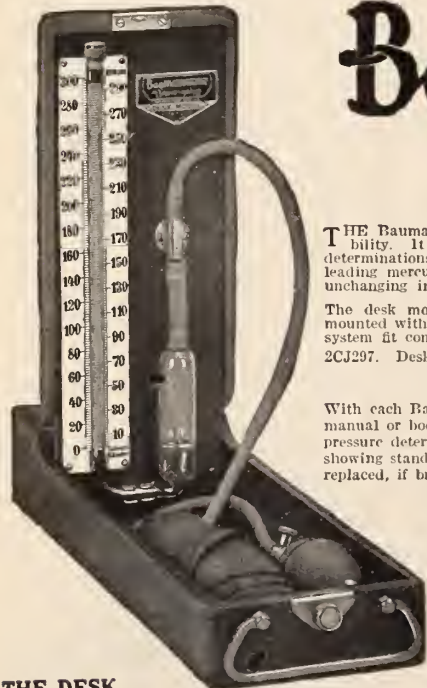
Never in the history of the Medical College of the State of S. C. was there such a large and enthusiastic gathering as sat down to the banquet held at the Charleston Hotel during the meeting of the State Medical Association. Dr. Robert Wilson Jr. Dean of the College presided.

A new Constitution was adopted which provides that the State be divided into districts and thus every section of the State become intimately associated and interested in the future development of this splendid institution. Dr. D. M. Crosson of Leesville was elected president. In 1924 the College will celebrate its one hundredth anniversary.



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The Journal OF THE South Carolina Medical Association

VOL. XIX.

GREENVILLE. S. C., JUNE, 1923

NO. 6

CONTENTS

EDITORIAL DEPARTMENT:

Abrams Treatment in South Carolina 505

ORIGINAL ARTICLES:

Simple Methods Which Aid in the Detection of early
Nephritis by George R. Wilkinson, M. D., Green-
ville, S. C. 506

Twelve Years in Rural Health Work by L. A. Riser,
M. D., Columbia, S. C. 509

(Contents continued on page ii.)

The Baker Sanatorium

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ARCHIBALD E. BAKER, M. D., F. A. C. S. Surgeon in Charge
ARCHIBALD E. BAKER, JR., M. D., Associate



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The Public Health Program of the South by W. S. Leathers, M. D., Jackson, Miss.	513
Salviary Calculus by S. C. Hays, M. D., Clinton, S. C.	519
UROLOGY DEPARTMENT	521
OBSTETRICS AND GYNECOLOGY	522
DERMATOLOGY AND SYPHILOLOGY DEPARTMENT ..	523
SURGERY DEPARTMENT	524
SOCIETY REPORTS	525
MINUTES	527

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The Journal

OF THE

South Carolina Medical Association

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ASSOCIATE EDITORS.

INTERNAL MEDICINE

GEORGE R. WILKINSON, M. D., Greenville, S. C.

PEDIATRICS

WM. P. CORNELL, M. D., Columbia, S. C.

OBSTETRICS AND GYNECOLOGY

R. E. SEIBELS, M. D., Columbia, S. C.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

ROENTGENOLOGY

FLOYD D. RODGERS, M. D., Columbia, S. C.

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EYE, EAR, NOSE AND THROAT

W. C. TWITTY, M. D., Rock Hill, S. C.

DERMATOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

PUBLIC HEALTH

LEON BANOV, M. D., Health Officer Charleston County, Charleston, S. C.

ANAESTHESIA

J. B. TOWNSEND, M. D., Anderson, S. C.

NERVOUS AND MENTAL DISEASES

B. O. WHITTEN, M. D., Supt. Training School for the Feeble-minded, Clinton, S. C.

EDITORIAL

ABRAMS TREATMENT IN SOUTH CAROLINA

We have been informed that the Barnwell County Medical Society on May 30th adopted resolutions expelling all members who now or may in the future practice Abrams Methods of treatment. This action is in line with similar resolutions adopted by medical societies in various parts of the country. The Journal has had several requests to the effect that the Abrams method be denounced by the publication of various reprints from other journals and magazines. We are heartily in favor of giving wide publicity to an expose of the

practices of the cults, but the Journal of the American Medical Association and several other national journals have for the past year or so published extensive investigations along this line. The majority of our members now have access either by subscription or otherwise to most of these periodicals. Several of our county societies have taken steps to limit the extension of Chiropractic methods, but so far as we know Barnwell County is the pioneer county society in South Carolina to vigorously attack the Abrams disciples. According to the Secretary's report all of the Barnwell County members who have been expelled live in other sections of the State.

ORIGINAL ARTICLES

SIMPLE METHODS WHICH AID IN THE DETECTION OF EARLY NEPHRITIS

By George R. Wilkinson, M. D., Greenville, S. C.

Mr. President, and members of the Sumter County Medical Society: The writer wants to assure you that he esteems it a privilege to have been invited by your secretary to read a paper on a subject related to the practice of internal medicine.

The subject that has been chosen is "Simple Methods Which Aid in the Detection of Early Nephritis." It will be the purpose of the writer to confine this paper to the group of cases which have no specific complaints referable to the kidneys and whose gross specimens show little or no changes from the normal when examined by the usual chemical and microscopic methods. The type of case which shows gross urinary changes has been purposely excluded.

The majority of the gentlemen present have already attained the age when one begins to feel in some way the stress and strain of active practice and perhaps, often wonders when alone just what sort of events will terminate his existence. When the mind once wanders along these lines the possibility of nephritis is always present.

is paper purposes to call to mind the earliest manifest findings which give evidence to vascular changes; changes which have advanced to such a limited extent that there is yet abundant opportunity for prevention or cure. There are many treatises which tell of the more advanced

changes, but the literature is not so full in its discussion of the earlier changes.

Prophylaxis with particular reference to the renal tissue is also not stressed when its bare mention would do more than all the regime which is usually instituted after the gross symptoms appear.

It has become fashionable these days for business men to have themselves carefully examined from time to time, not because of ill health but because of a desire for longevity and a longer period of usefulness. Many big business men are having their lives insured for large sums of money, payable to their business, especially when they are entering into a new program of expansion, since the weal of the newly invested capital so largely depends on the continued good health of its good industrial leadership.

Recognizing the possibilities, a more enlightened public is requiring of its physicians not only aid when in actual distress, but also the solace which comes from the assurance based on careful study, proving a given individual in good health. The cases that will be used to illustrate the points in this brief paper will be taken from the ones who came to the writer with no particular complaint, except that they wanted a general inventory taken of their physical status and a critical report rendered.

One is often content to tell a patient that his kidneys are in good condition especially where little or no pressing symptoms are complained of and the ordinary chemical and microscopic tests of a single voided specimen taken at the time of the examination show no abnormal constituents present. By doing routine phenolsulphonephthalein tests or collecting specimens at two hourly intervals during the day and the total night urine in separate bottles a great many more

abnormalities are found that are not manifest or perhaps even obscured by the single routine examination, say, like the one ordinarily required by life insurance companies. These additional examinations are very simple and require very little of a physician's time. The phthalein can be easily administered at the time of the examination and the patient given the necessary instructions on a type-written or printed form. The collection of the twenty four hour specimen is simple when the patient can be handed a satchel with the bottles all labeled and the full directions inclosed. The writer finds that patients are far more interested in collecting the specimens according to the directions than the ordinary hospital attendant is. By having the directions plainly written and the bottles already for transportation little time is lost in the transaction. The specimens when returned are examined in the usual manner either by comparison or with a homemade colorimeter. The homemade colorimeter may be made by diluting a solution of the dye so as to have a series of test tubes containing 5, 10, 15, 20, 25, 30, 35, 40, 50, 55, 60, per cent respectively, of the original standard solution which is made by adding 1 c. c. of the commercially prepared ampule to 999 c. c. of water rendered alkaline by the addition of a few drops of sodium hydroxide. This color scale keeps for a good many weeks if kept out of the light when not in use. This test of the kidney function, first introduced by Rowntree and Geraghty, though well known and requiring but little apparatus, is not in common enough use when one considers the wealth of information that can be obtained from its frequent use.

The technique is simple. One c. c. of a standard solution is given either directly into a vein or intra-muscularly and the urine collected one hour later and two hours later when given in the vein, and 10 additional minutes is usually allowed when the dye is given in the muscle. This

time is allowed for absorption. The specimens collected are rendered alkaline and then are diluted to 1000 c. c. and compared with the color scale. A normal individual will excrete from 40 to 60 per cent in the first hour and 10 to 25 per cent during the second. Any reading below the normal is usually considered pathological.

The specimens collected in the so-called Mosenthal test require no more apparatus than is necessary for the examination of a specimen in the usual way. When this method was first elaborated the chemical constituents were all measured by analytical methods, however, the most important information to be derived can be obtained by simple measurements. By simply taking the specific gravity of each specimen and totaling the several amounts of urine contained in the day bottles separately from the night, the range of specific gravity and the total day and night amounts can be ascertained. A normal individual drinking 2,000 c. c. of fluids and eating three full meals would be expected to void somewhere between 1,000 and 1,800 c. c. per day. The average is 1300 c. c. Now the night urine should always be less than the day urine; 400 c. c. or less being the usual amount expected to be collected during the night. The specific gravity should vary at least eight points. When the specific gravity becomes fixed at either a high or a low level the kidneys are not functioning normally and should be considered pathological until proven otherwise. When the night urine equals or exceeds the amount voided during the day then there is additional evidence that a nephropathy is present.

A brief review of three cases whose first routine voided specimens showed no abnormal constituents will be given to illustrate the value of the examinations outlined above.

Case 1. D. M. D., white male, age 54, teacher. Complaint: "Migraine." Mother died age 59, cardio-vascular disease. Pa-

tient had typhoid uncomplicated at age of 23.

Present illness began ten years ago with headache associated with nausea; dyspnoea on moderate exertion; weight has gradually increased from 125 at the age of 25 to 216 at 54; habits excellent.

Physical condition: Patient is a large, well proportioned man past middle life; facies strained; scattered pigmented moles; arteries in eye grounds slightly light streaked; radials and brachials very slightly atherosclerosed; repeated blood pressure reading averaged 187 systolic and 122 diastolic; moderate left ventricular hypertrophy. Laboratory findings: white and differential counts normal; haemoglobin 92 per cent. Blood Wassermann negative. Blood urea 13 mg. per 100 c. c.; creatinin .9 mg. per 100 c. c. Gastric contents showed no free hydrochloric acid. Roentgenographic series negative for stomach; moderate left ventricular hypertrophy. Urinalysis showed no abnormal constituents on first routine examination of the voided specimen. Phthalein test 35 per cent first hour and 15 per cent during second hour; Mosenthal kidney test meal showed a variation in the specific gravity ranging from 1012 to 1020. Day urine 600 c. c., night urine 640 c. c., respectively; total urine 1240 c. c. Routine examination of 24 hour specimen showed a few granular casts and a faint trace of albumin. Stool negative and basal metabolic rate 2 per cent plus.

Diagnosis: Hypertension; mild chronic interstitial nephritis; obesity. Achlorhydria and left ventricular hypertrophy.

Discussion: In this particular case the headaches which brought the patient to my office could of course be attributed to the hypertension. However, as soon as the patient was put on dilute hydrochloric acid and some form of pepsin, the headaches were relieved long before the arterial tension began to recede. The striking thing about the case and the point to be stressed here is the fact that the first specimen

showed no abnormal constituents, the nephropathy being demonstrated only by a repetition of the routine urinalysis on the 24 hour specimen and the two other examinations.

Case 2. F. H. K., a white woman of 29 years, no occupation. Complaint: "Obesity". Mother has migraine. Tonsillectomy two years ago for dysphonia and chronic tonsillitis.

Present illness: Patient has gained weight for past 10 years. Ten days ago she consulted an oculist on account of a very small hemorrhage from one of the superficial vessels of her left sclera. Is slightly dyspnoeic on exertion, no dysuria and no pregnancies.

Physical examination: Height 64 inches, weight 202 pounds. Eye-grounds show some slight streaks along the larger arteries. Systolic pressure 144, diastolic 100. Artery wall soft. Laboratory study: Blood counts normal; haemoglobin 88 per cent; blood Wassermann negative; blood urea 13.5 mgs.; creatinin 1.1 mg. per 100 c. c. of blood. Urinalysis showed only a very faint trace of albumin by the heat and acetic method and an occasional pus cell in the voided specimen. Phthalein test 25 per cent for first hour and 20 per cent during the second hour, respectively. Mosenthal test showed a range of specific gravity from 1026 to 1030; day urine 665 c. c., night urine 625 c. c. Routine examination of 24 hour specimen showed very faint trace of albumin and an occasional pus cell. Basal metabolic rate minus 2 per cent. Stools negative for blood and ova.

Diagnosis: Obesity, with early chronic interstitial nephritis; moderate hypertension.

Here the routine urinalysis showed but a faint suggestion of trouble while the phthalein excreted was considerably below normal and the Mosenthal showed a definite nocturnal polyuria.

Case 3. B. M. W., white female of 52, housekeeper. Complaint: "Pain in the

lower right quadrant." Father died with cardio-renal disease at age 78, mother died at age 87 with apoplexy. Scarlet fever at age of 3, five attacks of pneumonia during childhood and early adult life, some joint pains in the lower extremities 3 years ago, tonsils and teeth removed, both breasts removed 6 years ago on account of what was termed "senile parenchymatous degeneration." Difficulty in vision three months ago. Was told by an oculist that she had a detached retina.

The present complaint began 12 years ago and comes on only when she is constipated and has never been associated with nausea, vomiting or fever, nor has it ever been severe enough to interfere with her work.

Physical examination: Past middle age white woman, weighing 167 pounds and measuring 67 inches. Eye-grounds on the left side; arteries streaked, tortuosity increased, veins engorged and obliterated where crossed by arteries, the lower hemisphere pale, difficult to bring into focus, discs clear. Right eye showed generally the same change in the arteries and veins. Brachials and radials moderately thickened. Systolic pressure 180, diastolic 80. Left ventricular hypertrophy moderate; slight tenderness on deep pressure over right lower quadrant. Laboratory study: White and differential blood counts normal; haemoglobin 90 per cent. Blood Wassermann negative on repeated examination. Blood urea 15 mgs. and creatinin .9 mg. per 100 c. c., respectively. Routine urinalysis; faint trace of albumin (heat and acetic method); occasional pus cell; phthalein test 45 per cent first hour, 10 per cent second hour, respectively. Mosenthal test showed range of specific gravity from 1004 to 1026; Day urine 1159 c. c., night urine 465, total for 24 hours 1624. Routine urinalysis of the twenty-four specimen showed no abnormal constituents.

Diagnosis: Hypertension associated with

the menopause; nephritis of the arteriosclerotic type.

Here there is a definite increase in the arterial tension with objective change in the retina and peripheral arteries with but little variation from the normal in all the examinations of the urine. However, with a very moderate decrease in the phthalein test and a slight total polyuria associated with the vascular changes there can be but little doubt that the kidney vessels are also involved in the process.

Conclusions: Two comparatively well known simple methods for studying the kidney functions have been outlined. Their relative simplicity and merits have been emphasized.

TWELVE YEARS IN RURAL HEALTH WORK

By *L. A. Riser, M. D., Columbia, S. C.*
Director Department Rural Sanitation
State Board of Health.

Twelve years ago the personnel of the State Health Department of South Carolina consisted of the State Health Officer, Director of Laboratories, Chemist, two stenographers and a janitor, and in July of this year, 1910, the Department of Rural Sanitation was added, with a Director and two assistants. The Director and his assistants were appointed and paid by the Rockefeller Sanitary Commission with the approval of the State Board of Health, and the Director was also to act as assistant State Health Officer.

The work of the Department of Rural Sanitation was the first Public Health Work ever done in the rural districts of South Carolina. The work was entirely on hookworm disease, and the first year it was carried on in five counties: Horry, Georgetown, Clarendon, Williamsburg and Marion. 4,695 children were examined

microscopically during the last six months of the year and 165 persons were treated for hookworm disease.

In 1911 another assistant was added to the force and two assistants were employed in the laboratory to do hookworm work, all of these being paid by the Rockefeller Sanitary Commission. The work consisted of public lectures illustrated by lantern slides, newspaper and other publicity. Free dispensaries were established for the examination and treatment of hookworm disease, and the infection ran from 57% to 90% in the counties where dispensaries were held. Articles were furnished the press for publication and the attitude of the press was reported "favorable", although it had been previously unfavorable. The financial report in 1911 shows that \$291.98 of the State's money was expended for office expenses.

At this time no State appropriation had yet been made for tuberculosis, and smallpox was the only disease on which any special fight had been made. In the report of the Chairman of the State Board of Health in 1911 we find this sentence: "The results of the hookworm work will be far more reaching than the mere suppression of hookworm disease, however important this may be. The sanitary instruction which these men are giving is already opening the eyes of numbers of the country folk to practical sanitation and teaching them lessons of hygiene, which, by leading to the prevention of disease, is bound to raise the physical, moral and intellectual standard of citizenship."

In 1912 twenty counties in South Carolina had educational campaigns in the rural districts. For six weeks in each of these counties an intensive hookworm campaign was carried on. Lectures were given in which not only hookworm disease, but every communicable disease was taken up and the method of prevention discussed. In the twenty counties 56,374 people visited the hookworm dispensaries and were ex-

amined for hookworm disease. When found infected they were given free treatment, and were taught how the disease could be prevented by proper sanitation. The report for this year states that "the discouraging aspect of the work is the difficulty of getting people to stop soil pollution." This is yet a great difficulty. The sanitary surveys of seventeen counties in South Carolina in 1912 showed a sanitary index averaging 4.1 out of a possible 100 points. The report states that this condition accounts for the prevalence of typhoid fever, diarrhoea and dysentery, and also for the high percentage of hookworm in the State.

From 1912 to 1916 these hookworm dispensaries were kept up and illustrated lectures given, newspaper articles written, circulars sent out and a general educational campaign kept up. In these lectures it was explained to the people what the State Board of Health was, and what it wanted to do for them. Each county was asked to appropriate \$50.00. This paid for part of the printing but we requested this small amount of money more for the purpose of allowing us to state that the county was assisting in these campaigns. All examinations were made by the microscope and 32,409 were examined for hookworm by the four men, who not only lectured but did the publicity work, made all the examinations themselves, kept the records, and treated 9,870 people in sixteen counties in the State. At the end of 1912 work had been done in all the counties in the State except Charleston, Kershaw and Saluda. These counties had up to this time refused to make the appropriation of \$50.00 and the money in Marion and Beaufort counties had been raised by private subscriptions. In the 1912 report the Director urges a whole time County Health Officer in each county, whose "duty it shall be to collect vital statistics, inspect school children and teach by personal instruction, lectures, newspaper articles and the invaluable little things

which make for a lower morbidity and mortality rate with all the benefits accruing therefrom."

In 1914 the Board of Health appropriated \$175.00 for the Bureau of Rural Sanitation and work was done in the counties which refused to appropriate, the Rockefeller Commission making the entire appropriation for Charleston and Kershaw, the County Educational Board giving the necessary \$50.00 for Saluda County. This completed the work in every county in the State, and a second campaign was conducted in fourteen counties. In September of this year community work was undertaken in Cherokee and Spartanburg counties. A community in each of these counties was selected. These communities were each about sixteen square miles in area and had a population of about 1,000 people. A complete survey of the community was made, a census taken, and it was ascertained as accurately as possible the number of cases of tuberculosis, typhoid fever, malaria and pneumonia which had occurred during the five preceding years. A map was made showing the location of each house, the name of the householder and the sanitary condition of the house and its surroundings. A lecture was given each week on sanitation and the various communicable diseases. These lectures were illustrated by lantern slides. For the year 1914 the Rockefeller Sanitary Commission appropriated \$12,189.44 for Rural Health Work in the State, the counties appropriated \$787.39 and the State expended \$1,136.32. This latter amount was the first appropriation of any consequence made by the State for health work in rural districts. As a result of four months' work in Spartanburg county, sanitary privies had been constructed at 95% of the homes in the Reedsville community and 85% of the residents were examined for hookworm; and of the 20% found infected, nearly all had been treated.

In 1915, the Bureau of Vital Statistics was organized and began to function in South Carolina. In the Chairman's report for 1915, he deplores the fact that "our death rate for typhoid fever is 316 per 100,000"; and he further states that "sanitary ignorance or sanitary carelessness is costing the State between two or three hundred thousand dollars from typhoid fever alone."

The State Sanatorium for the treatment of Tuberculosis was also constructed this year. In October of 1915 the first county unit was organized, consisting of a Medical Director and three Sanitary Inspectors. The State paid half of this expense and the Rockefeller Sanitary Commission the other half. The county made no appropriation. The work was done in one county, the Director being in charge, and three communities were worked at a time, a Sanitary Inspector being placed in each community.

In 1916 two counties were selected, each being under a physician trained in Public Health Work, with several Inspectors and a State Director who had charge of all the work, and in addition investigated the epidemics and assisted in establishing quarantine. Epidemics of infantile paralysis took up a great deal of the time of the Director but the effort to secure county appropriations for County Health Departments was continued and in 1917 two counties made appropriations of \$2,000.00 each, the State appropriated \$2,000.00 and the International Health Board \$2,000.00. Many difficulties were encountered as the war came on and the price of labor went up. The first County Health Exhibits were put on at the County Fairs, and the first health parades held. Floats illustrating health work were shown. A special exhibit was shown at a number of County Fairs, literature was given out and as many people as possible were personally approached and told of the advantages of a county Health Department. The summary of the work for the year shows 8,915 homes personally visited and

27,539 people instructed by the Director and his assistants.

In 1918 two new counties made appropriations and nurses were added to our County Departments. In three of these counties we were fortunate enough to secure nurses with Public Health experience. In the other county we were unable to secure a nurse with experience and a local nurse assisted the Health Officer in his work. The first nurse to do Public Health work in a Rural District of South Carolina was put in Greenwood County. She was a graduate of a school for Public Health Nurses and had years of experience. The State Director and all of the County Directors but one went into the army. Most of the Inspectors answered the call and some of the nurses also. The work was seriously disorganized. Substitutes without training were engaged to hold the Department together. However, in 1918 the State appropriated for the Department of Rural Sanitation \$14,500.00, the largest appropriation yet received.

The first Infant Welfare work was done in the rural districts beginning in the spring of 1918, and continuing throughout the summer. Children were weighed and measured and the mothers were instructed in various problems of care and feeding. Medical inspection of schools was also started in the fall of 1918, and a few rural schools were inspected in two counties.

1918 and 1919 were the most difficult years we have had to encounter. Two of the counties whose directors went into service dropped their Departments in 1919 and it was very difficult to get men with vision to take the positions in the new counties. It was also difficult to get nurses. Our nurses up to this time had no State Supervision. The Department of Child Hygiene and Public Health Nursing was put on in 1919 and took over this supervision.

In 1919 there were six counties with County Health Departments, and in these

counties 15,000 school children received a medical examination. Our first inoculations against typhoid were begun and 3,000 children were inoculated; 27 cotton mills were sewerred.

In 1920 eight counties made appropriations for County Health Departments, and a traveling moving picture unit was added for the summer months. Our Conferences of County Health Officers were begun and proved very stimulating. Our report for 1920 shows that more than 22,000 school children were vaccinated against smallpox in the eight counties. Our moving picture truck showing films on disease prevention went into eighteen counties and more than 20,000 people, some of whom had never seen a moving picture before, saw these pictures.

In 1921 the State cut down our appropriation to such an extent it would have been impossible to run and give the counties financial assistance had not the International Health Board come to our rescue. The counties also cut their appropriations, and their working force was necessarily cut down to a minimum. Compulsory vaccination among the school children resulted in 32,500 vaccinations and at the typhoid clinics 14,757 were inoculated against this disease. At some personal sacrifice the moving picture truck was run for three months.

No increase was made in the number of Departments until this year, 1923, when we will have ten full time County Health Departments. Three new ones are now being organized. We will also have a moving picture unit for full time, and a free Dental Clinic is now being organized to begin work very soon.

During the past year we held free tonsil and adenoid clinics, dental clinics, clinics for typhoid inoculations, smallpox vaccinations, infant welfare clinics, tuberculosis clinics and clinics for the administration of toxin-antitoxin and we consider this the best year in our history.

Twelve years ago no health work had ever been done in the rural districts of South Carolina. Today, ten counties have full time County Health Departments and eight other counties maintain full time County Health nurses. Twelve years ago the State made no appropriation for Rural Health Work. This year we will receive an appropriation of \$19,247.90, besides what is given to the other Departments, which all now do some work in the rural districts. From THREE Departments in 1910 the State Health Department has grown to ELEVEN Departments.

Our Vital Statistics Department was not organized until 1915, and we have no accurate records of deaths and births before that time. For the year 1915, the total deaths reported in South Carolina numbered 24,501, or 15.2 per thousand. We now see this number in 1922 reduced to 20,695, or 11.9 per thousand.

In seven years the number of deaths from typhoid fever has been reduced from 530 to 330; dysentery from 502 to 141; other intestinal diseases from 1306 to 975, tuberculosis from 1991 to 1489.

If our present death rate is reduced in the next seven years as it has been in the past seven years, South Carolina will stand at the top. At the present time a baby born in South Carolina has a better chance to live than it has in 29 other States of the Union, and there are only eighteen States in which its life expectation is greater.

Last year 19.69 of our rural population were protected from preventable disease by whole-time County Health Departments. This year, with three new counties added, we will raise this percentage materially. Last year only two other Southern States had a higher percentage than South Carolina of their rural population with whole time health officers. It is generally accepted as conclusively demonstrated that County Health Departments administered by a trained personnel, giving their full

time, offer the most practical solution of the Rural Health Problem.

With the exception of Ohio and Vermont, the notable advances made in the improvement of local rural health administration are found exclusively in the Southern States, and the fact that we stand third in the South and fifth in the United States should be a source of pride to all South Carolinians who are interested in the health and welfare of their State.

THE PUBLIC HEALTH PROGRAM OF THE NEW SOUTH

By W. S. Leathers, M. D., Jackson, Mississippi.

In selecting this subject, it is not my purpose to discuss in detail a program especially applicable to the South but rather to call attention to the progress which has been made in public health work in the Southern states and to emphasize some fundamental phases of health work in the promotion of a health program. It is clear that certain fundamentals should be kept in mind in directing public health activities irrespective of the locality or section of the country in which such work is to be done. It is also equally evident that there are well recognized conditions in different sections of the country with respect to climate, soil conditions, variations in population, and other factors that may influence and definitely determine the kind of public health program that is peculiarly applicable to a particular section.

There has been during the past twenty-five years a commercial and industrial revival in the South and new ideals of service have materialized. With this spirit and growth, it would indeed have been most unfortunate had there not been a corresponding interest in the promotion and development of the public health. There

can be no question about the fact that health is the greatest asset of a state or nation, and in increasing the wealth of the South there is no more fundamental conception to keep in mind that what was expressed by Emerson, that "The first wealth is health."

During the past fifty years, immense progress has been made in the development of public health work, not only in the South, but throughout the nation. It will be recalled that during the early part of the past half-century, there were only four state boards of health organized, namely, Louisiana, Massachusetts, Virginia, and California, and interest in preventive medicine was confined largely to the sporadic outbreaks of disease. A decided impetus was given to public health organization in the establishment of the American Public Health Association in 1872. This organization has been potent not only in the promotion of public health education, but in stimulating research in preventive medicine. It is, however, true that the modern public health movement had its birth with the discovery of the germ theory of disease, about 1875. During the years that have followed, there has been marked advancement in the methods employed in laboratory technique, in the discovery of the modes of transmission of the infectious diseases, and in the application of measures for the prevention and control of disease. This discovery and progress in preventive medicine has resulted in remarkable progress in public health organization, the prevention and suppression of infectious disease, and in the promotion of a broad program in the betterment of health conditions. The people have been awakened to the value and importance of health in a way to cause amazing interest in the promotion of public health and a greater appreciation of the value and benefits to be derived from scientific medicine.

It is notable that all of the states at the present time have boards of health and a

large percentage of them have well-organized and efficient departments of health. The public has been made to realize that the greatest burden that can be imposed upon the citizenship of a state or nation is the waste accruing from unnecessary sickness due to infectious disease. The public conscience has also been quickened to the realization of the fact that the commercial and industrial development of the people depends very largely upon attaining a high degree of efficiency and that no people can be efficient and highly successful in achievement who are disregardful of the principles of healthy living.

There is no section of the United States in which more progress has been made in the development of effective health work and in the prevention and control of disease than in the Southern states. Indeed it may be stated that the South has acquired leadership in public health work during the past twelve years.

Beginning with the announcement of the discovery of Sir Ronald Ross in 1890 that malaria is transmitted by the anopheles mosquito, and this followed by the epoch-making discovery of Walter Reed in 1892, that yellow fever was transmitted by a certain kind of mosquito,—*Stegomyia fasciata*,—measures for the prevention, control and suppression of malaria and yellow fever were formulated upon a scientific basis and for the first time in the history of the nation and world, yellow fever was placed under control and practically eradicated. In passing, it should be stated that the discovery of the mode of transmission of yellow fever by Dr. Walter Reed, because of the fear and horror of this disease and the economic depression incident thereto, has exerted a greater influence in stimulating and stabilizing the confidence of the public in the possibilities of preventive medicine than any other one discovery of medical science. Because of the work of such men as Reed, Gorgas, and Carter, yellow fever

may now be regarded as a public health problem of only historic interest.

The discoveries which have been made and measures instituted for the prevention and control of malaria will result in its suppression and eradication in the South within the life of the present generation. There is no disease which is more insidiously wasteful to human life and destructive to industrial progress in tropical and semi-tropical countries than is malaria. One of the outstanding achievements of modern medicine is the progress which has been made in the South during the past decade in the prevention and control of this disease. Incidentally, it may be stated that there is no one who has contributed more to this result than has Dr. H. R. Carter, of the United States Public Health Service.

The enlightenment of the public on the etiology mode of transmission, and methods of control of malaria has resulted in an appreciable reduction of the disease in all of the Southern states. This fact is substantiated by statistical data easily available, showing that in certain localities the disease has been placed under control. In others it has been eradicated, while there has been a uniform reduction of about 33% in cases and deaths in many of the Southern states. It is, therefore, only a question of a relatively short time when malaria will be placed entirely under control in the South and eventually suppressed and practically eradicated.

In the light of this remarkable progress in the prevention, control and suppression of malaria and yellow fever, the two diseases that are more responsible for creating unfavorable impressions abroad relative to health conditions in the South than any other diseases, there can be no justification on the part of anyone in expressing the attitude that the health conditions in the South present relatively speaking a more serious outlook or problems more difficult of solution than are found in any other section of the United States.

It is indeed gratifying that more progress has been made in the prevention and control of disease and in the promotion of public health in the South during the past twelve years than in any other section of the United States. This fact may be substantiated by an analysis of the appropriations made for health work, the present status of health organization, and the actual results achieved in the control of disease. Considering these three points of view in the order in which they are named and using only eleven Southern states from which statistical information is available as the basis of comparison, in 1910, only \$255,395 was appropriated by the respective states for health work, but in 1921, this total had increased to \$2,376,147. This shows a total increase for this period of about 350% for health work in the eleven states.

The figure for 1914 for the eleven Southern states shows an appropriation of \$463,595 and during the remaining eight years, including 1922, the appropriation had increased for health work in these states to \$1,919,504. So it may be stated that the increase in appropriation for health work in the eleven Southern states was not less than 314%. But from a comparative standpoint what about the remaining thirty seven states of the Union? There was appropriated in 1914 in these states for health work, \$3,896,910 and in 1922 the total appropriation had increased in these thirty seven states to \$9,548,222. This shows only an increase of 145% during the corresponding period in thirty seven states of the Union as compared with 314% increase for health work in the eleven Southern states.

It is a well-recognized fact that the future of health work will depend largely upon the organization of county departments of health and the application of the principles of sanitation and hygiene to rural life. It is a signal fact that state health organization has progressed in the South during recent years in such a way as to be one of

the outstanding achievements in public health endeavor and in no part of health organization has there been more remarkable growth than in rural sanitation or what may be more correctly termed, county health work. The value and far-reaching importance of this development cannot be over-estimated when it is known that on the average, about 80% of the people in these states live in rural communities. It is therefore obvious that no state health organization can receive the proper evaluation unless the plan of organization, methods employed, and the appropriations secured are adequate for extending health activities upon an intensive basis to rural communities. What has been accomplished in the South in this respect as compared with other sections of the country, marks an epoch in the progress of health work. It happens that the figures are not available in making an accurate comparison from this standpoint except for the years 1919 to 1922 inclusive, but, however, the data available for this period may be used as the most reliable index of the advancement in health work broadly speaking in the United States.

For the sake of convenience, it may be well to classify the states into three groups in making a comparative statement relative to county health organization, namely, the Southern states, the Eastern and Central states, and the Western states. In 1919, there were seventy one all-time county departments of health in twelve Southern states and in 1922, the number had increased to one hundred and twenty-seven. In twenty-five Eastern and Central states, there were twenty-three all-time county departments of health in 1919, and the number had increased to sixty-seven in 1922. In eleven western states there were four all-time county departments of health in 1919 and this number had increased to twenty-one in 1922. It will, therefore, be seen that in twelve Southern states there were one hundred and twenty-seven all-time county depart-

ments of health in 1922, in twenty-five Eastern and Central states, sixty-seven all-time county departments of health in 1922, and in eleven Western states only twenty-one all-time county departments of health in 1922. To summarize, out of the total number, two hundred and fifteen all-time county departments of health in the United States in 1922, more than 70% of them were found in twelve Southern states.

This illuminating data shows unmistakably that the South occupies at the present time a position of constructive leadership in the development of effective health organization, in the prevention, control, and suppression of infectious disease, and in the promotion of public health. It also signifies the keen interest which is being manifested on the part of the citizenship of the Southern states not only in the actual prevention of disease but in elevating the health standard or, if you please, creating what may be rightfully designated, a health conscience.

Time will not permit the consideration of the results that have been attained in the prevention and control of disease especially within the last decade in the South, but it may be stated that there is no section of the country in which there have been more outstanding achievements in health work. In 1910, in co-operation with the Rockefeller Sanitary Commission, a campaign was inaugurated for the education of the people in the prevention and eradication of what are designated as the "soil pollution diseases," namely, typhoid, hookworm, and other intestinal infections. This campaign was waged aggressively for a number of years and no effort has been made which has been more productive, both directly and indirectly not only in the control of the "soil pollution diseases," but also in the development of the broad program of public health work. As a consequence, typhoid fever has been reduced not less than 50% in morbidity and mortality during the last ten years and it is safe to predict that with-

in the next fifteen or twenty years, this disease will cease to be of concern as a public health problem. Likewise hookworm disease has been reduced in many localities from 40% to 75%, and in certain localities it has been practically eradicated.

The serious cases of hookworm which were formerly prevalent are no longer found. It is also a fact that the infections from this disease exist largely in a mild form, which in itself is evidence of the disappearance of hookworm. Indeed, the disease may be considered as being now under control.

Reference has also been made to malaria as a problem of special concern in tropical and semi-tropical countries, but there has come about with the rapid strides in public health development a general understanding of the malaria problem and as a result this disease is being rapidly reduced in those states in which it is prevalent. The uniform reduction in malaria morbidity during the past several years is not less than 30% and in many localities it has been placed under control and in reality suppressed.

The educational activities through the state and local health organizations have been most effective in the enlightenment of the people relative to nutritional problems and because of this propaganda and the intelligent consideration of such problems, most gratifying results have been secured in the eradication of pellagra. In fact, think that the disease has been so greatly reduced during recent years that it need not now be given serious consideration from a public health standpoint.

There has been a great awakening on the part of the people in the Southern states in the general improvement of health conditions among children and there is a growing sentiment that the public health program should be focalized on child health. In practically all of the Southern states there are bureaus of child hygiene organized, and systematic work is being done for the improvement of child health.

These facts, together with others that might be mentioned, bear out the statement that the South occupies a position of vantage in health organization, in the promotion of rural sanitation, and in formulating plans for doing child welfare work.

In the development of the future program of public health work in the South, three outstanding phases of public health should be emphasized:

1. Devising better methods of disseminating health knowledge among the people as the most fundamental step in the promotion of all health work;

2. The establishment of all-time county departments of health upon an efficient basis;

3. The development of a broad program of public health placing special emphasis upon maternity and infant hygiene, and the conservation of the health of the child of pre-school and school age.

Devising Better Methods of Disseminating Health Knowledge Among the People.

The most important single step in the promotion of public health of the future will be in "getting over" health information to the public. We know that in the majority of infectious diseases there is sufficient information at hand if properly applied, to prevent and eradicate these diseases.

The method of presenting this information to the public should be more carefully studied with a view of presenting it in a more attractive form and in a more practical way. This cannot be done by what may be regarded as whirlwind methods or trick advertising schemes. On the other hand, the plan used should be conservative, sane, and practical. The methods employed should appeal especially to the non-reading public as well as to those who use intelligently the written page. We should sustain a thoroughly democratic attitude to the public and avoid in all educative work, any compulsory attitude. The lit-

erature used on health subjects should be made attractive and readable.

The illiterate public should be reached in a more systematic way by the spoken word and the method of education by demonstration should be employed especially in Co-operation with the medical profession, in the enlightenment of the public to the need and benefits to be derived from corrective work among children. If we are to keep the people interested in the application of the principles of hygiene and right living, the attitude of public officials and the medical profession must be consistently strong and effective. Whatever methods are used in educating the public, the element of permanency of result should be kept foremost.

The Establishment of All-time County Departments of Health.

I think that it will be agreed that the central organization or the state department of health so termed, in a large percentage of states has attained a rather complete development and a reasonable degree of efficiency. Why no one would be justified in making the statement that the appropriation for the central organization should not be increased for what is deemed advisable in projecting the health program upon an efficient basis. I do feel that the most important phase of public health development of the future is the organization and promotion of all-time County departments of health. Such organizations may be looked upon as the long arms of the state department of health reaching out and touching the hearth-stones of the people of the state. It is by means of and through the country health organizations that we may hope for the largest possible returns in the prevention and control of disease in the future. The Conservation of the health of the people is coming to be regarded as a business of the government.

An efficient local health organization is indispensable in maintaining that standard

of physical efficiency among the citizenship of the state which is so essential in industrial and commercial development. It is therefore obvious that the time is at hand when the citizens of a country or group of counties should be made to realize the value of efficient county departments of health, functioning day in and day out, year in and year out in the prevention and control of disease and in increasing the productive capacity of its citizenship. Such as local health organization will serve to bridge the gap between the efforts of the medical profession and the needs of the people in giving the necessary relief in the unsupplied field of medical service.

Maternity and Infant Hygiene, and The Pre-school Age and School Age Child.

There is no phase of public health work receiving more attention at the present time than maternity and infant hygiene and the health of the child of pre-school and school age. The increasing emphasis upon this phase of health work has been largely due to the financial aid of the Federal Government under the provisions of the Shepard-Towner bill, in co-operation with the respective states. When it is known that the death rate among mothers in child birth has not decreased during recent years and that the mortality among infants less than one year of age is alarmingly high, it is logical that special emphasis be placed upon this important phase of health work. As further evidence of this fact, 1-7 of all deaths occur among children before reaching one year of age, and approximately 140,000 infants die in the nation annually before reaching three months of age. In turn, there are about five million children in this country under five years of age and statistics show that something like one million, five hundred thousand suffer from diarrhoea and enteritis with attendant loss of life. In recent years, health surveys have shown that the health of school children has been greatly neglected and as a consequence, increasing interest and attention is being given to the

protection of the health of the pre-school age child and the child of school age. As statistics show that as many as fifteen million children out of the total of twenty million in the United States, suffer in one form or another from bad mouth hygiene or defective teeth, this one fact stands out as an index of the great need of constructive health work among children of the pre-school age and school age. It is therefore evident that in the development of the public health program of the future, more and more attention will be given to the child as the most potential unit of society. Increasing emphasis will be placed upon maternal and infant hygiene and the reduction of in-

fant mortality. Moreover, the school child will be taught in a more systematic way, health habits, and will be shown the reason for them.

Opportunity will also be afforded children for the correction of incipient physical defects and as a basis of improved health standards, there will be devised a system of physical education in our schools with supervised play and work. Much emphasis will also be given to starting the child right in its emotional and mental life. In brief, the public will demand that the state assume due responsibility for the conservation of the health of children in attaining the period of maturity.

SALIVARY CALCULUS

Report of two cases.

By S. C. Hays, M. D., Clinton, S. C.

Calculi sometimes are formed in the parotid gland and its duct, but more commonly are found in the Maxillary gland or its duct. They may grow to size of hens egg, but are usually detected and removed while small.

The usual point of lodgment is near orifice of duct, and in these cases surgical interference is easy, local anaesthesia, and

slitting duct or orifice, and turning out of stone all that is necessary; while if in the gland itself, removal of gland may be necessary.

The stones are composed of lime, magnesia or sodium salts and as a rule Calculi usually cause irritation, inflammation, even suppuration. Their action is usually intermittent, acting like a ball valve.

The cause of a formation like the urinary, or biliary calculi is probably due to entrance of infection or foreign body of some kind forming a nucleus for the deposit of salts.



Case 1. Boy age 14. For about six months has complained of intermittent swelling of left submaxillary region, usually occurring during eating, becoming slightly sore and enlarged, subsiding in several hours. Examination showed some swelling of left submaxillary gland, slightly tender, about size small hens egg. Orifice of left Whartons duct showed redness and swelling. A small shot like body could be felt about 1 cm from orifice which could be rolled under finger and movable backwards toward gland.

Under local anaesthesia application, a small longitudinal slit made in orifice, and the mass turned out of duct with pressure from behind with finger. The mass was small calculus about size of buckshot, smooth perfectly round and of greyish white color.

Recovery uneventful in very few days. No symptoms reported since removal.

Case 11. J. F. Age 28. For three years patient has had a gradual enlargement in right submaxillary region which for the past four months has become extremely hard much larger and at times very painful. The swelling becomes harder and more painful when eating, or when chewing, or sometimes upon the smell of aromatic foods cooking. After eating, mass decreases in

size and becomes less painful. For over a year attempts have been made to "draw this mass to a head" by hot applications, poultices, etc., without avail.

Examination showed a very large mass beneath lower right jaw in region of submaxillary gland, mass stoney hard, surrounding tissues brawny, and slightly reddened. Orifice ducts appeared normal, nor could any mass be felt within mouth along route of Whartons duct.

X-ray picture made which revealed a shadow outline of entire submaxillary gland well defined, and near center of this shadow a smaller shadow about 1 cm diameter quite dense, revealing well defined calculus. Patient was operated upon by Dr. Geo. S. King, with whom I was associated at the time, and myself. Entire gland removed. Gland about four times normal size. Very hard, gritty on section, showing lime deposits throughout. A stone, greyish in color and 1 1-4 cm in diameter was turned out of pelvis of gland at duct origin. Wound closed with small drain removed two days later. Recovery uneventful. Photograph shows calculus but the fainter shadow of gland is not reproduced in electroplate, on account considerable reduction in size of original picture.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

PROSTATIC OBSTRUCTION

It is not a bold venture to state that prostatic obstruction is little understood except by those of the profession who have made special and intensive study of the condition. A meagre knowledge of this condition can only allow much misdirected and often harmful efforts for its relief.

While any discussion of prostatic maladies in a paper of this kind, which must necessarily be brief, could only be fragmentary in character, yet some fundamentals may be brought out. A due regard for these fundamentals would be of inestimable good to the patient.

Progress in the diagnosis and treatment of prostatic disease has been made, for the most part, in recent years. The advances cannot be surpassed in brilliancy by those in any other branch of medicine or surgery. Much of the credit for these advances must be given to Dr. Hugh H. Young, of Baltimore.

The common causes of prostatic obstruction are: hypertrophy, cancer and inflammation; less common, calculi, sarcoma and syphilis of the prostate. There are, however, other very common causes of urinary obstruction which are frequently not taken into consideration. These are median bar formation and contracture of the vesical neck, both of which are quite common, and may give the same symptomatology as that from any form of enlargement of the prostate, considering the chronic types of obstruction. Frequent, painful and difficult urination, and residual urine, may be due to any of the above lesions. Only careful examination, many times with the aid of the cystoscope, will reveal the underlying lesion.

There are also other conditions that must be borne in mind in making a diagnosis of the cause of a urinary obstruction. These are stone in the bladder; diverticulum of the bladder; tumor of the bladder situated at the vesical orifice; disease of the central nervous system, such as tabes dorsalis.

The median bar, which is a type of obstruction at the vesical orifice, due to hypertrophy of trigonal tissue just at the vesical orifice, can be revealed by cystoscopy. Contracture of the vesical neck can also be diagnosed in the same manner and by exclusion. Both of these conditions are relieved by relatively simple operations and unless the proper diagnosis is made, a prostatectomy would be preformed without relief. In some cases in which operation for removal of the prostate should be done, procedures for the relief of the median bar or contracture should also be carried out at the same time.

Rectal palpation is not sufficient in very many cases in determining the presence of an obstructing prostate. The lateral lobes may not be enlarged, while the gland may have grown in its median portion and extended through the bladder sphincter into the bladder. Cystoscopy will determine such a condition.

Chronic inflammatory disease of the prostate may occur and cause obstruction, and not necessarily be accompanied by a septic picture. Massage of the gland expresses a very large amount of purulent material and unless there is also some hypertrophy, the patient gets entirely relieved of symptoms and residual, with appropriate simple procedures. In such a case it would seem quite wrong to have the patient undergo removal of the gland for relief.

OBSTETRICS AND GYNECOLOGY

R. E. SEIBELS, M. D., Columbia, S. C.

A perineorrhaphy is simply suturing a laceration of the perineum, while a perineoplasty is the restoration of function of the perineal body by a plastic operation. The former term should therefore be applied only to the immediate repair of an intrapartum tear while the latter designates the operation performed at some later date and may include not only the re-union of tissues separated in delivery but also the restoration of function of tissues rendered more or less useless by birth injury plus herniation of the lower bowel.

In the immediate repair of lacerations is included those suturings done within the puerperium, whether within a few hours or a few days as the indications may be. This restitution of integrity is never neglected by the conscientious obstetrician for he has learned that there is no disgrace in a tear, but there is serious neglect in not observing it and repairing it. Just a word about this procedure: the failure of suturing to hold, provided ordinary asepsis is maintained and the suture is not put through the rectum or the rectal mucosa has not been seriously traumatized, is due more frequently to necrosis of the tissues than to true infection. Interrupted sutures tied too tightly, or continuous sutures of the mucosa, put in too close together and pulled too hard, will give rise to sloughing. If the obstetrician will inspect his suture line twice during the 48 hours following their application he will see the edema, anemia and tissue death taking place.

Much dissatisfaction has been expressed by obstetricians with the result of perineoplastics performed on patients during the child-bearing years. Following these operations there has been dystocia and, not

infrequently, a tear has taken place of more serious extent than the laceration which was repaired. This difficulty is due in large measure to the fact that the majority of operators do not engage in obstetrics and therefore have no chance to see the result of their craftsmanship offering unreasonable resistance to the advancing head and finally giving way under its impetus. They have forgotten the definition of their operation—restoration of function. Our attention was recently called to this by the examination of a physician's youthful wife who had had a plastic operation in what her surgeon termed a "relaxed perineum". The introitus admitted one finger only and the "virginal size" speculum was a tight fit. She believed she was pregnant and our relief was great when examination showed no pregnancy. Her delivery will be a serious problem.

Except in the case of complete laceration or possibly in repeated suturings of the perineum where there is little left but scar tissue a plastic restoration of the perineal body should offer no resistance to delivery and with due care to prevent too rapid advance of the head, should be no more liable to laceration than an unoperated perineum.

Following the operation for complete laceration and occasionally in the presence of extensive scar tissue, the surgeon has to do such extensive dissection that he may foresee difficulty in the case of another labor. In such cases he should carefully explain the situation to the patient and her physician before performing the operation, possibly advising cesarean section if another child is desired.

As to the suture material. Many men use silkworm-gut or silk in the perineum.

fearing infection with the use of cat-gut. Infection is rare under proper conditions and as shown above, the sloughing and failure of the operation is due to the method

of suturing. When properly applied and tension is guarded against, cat-gut holds satisfactorily and requires no removal.

DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

CASES ILLUSTRATING SOME CONTRAINDICATIONS TO THE INTENSIVE TREATMENT OF SYPHILIS.

Clinic of Dr. V. J. Wile.

Medical Clinic of North American, March 1923.

In this article Dr. Wile brings very clearly to our attention the evil of the growing tendency of the routine treatment of Syphilis without the proper consideration of the patient.

The modern tendency is for Syphilitics to be treated in groups. Large institutions have been established; State, Federal and Civic Clinics have led to what might be termed the "mass treatment" of the patient, which in turn has led to an attempt to standardize treatment. In order to avoid this tendency to treat Syphilis and forget the Syphilitic; he draws attention to the following factors to be considered.

The first of these is the age of the Syphilitic. What constitutes an adequate treatment for the young man or woman in the full bloom of life is far too severe and cannot be tolerated without definite injury by the Senile Syphilitic. The second factor which one should always consider is the duration of the Syphilis. Early Syphilis intensely treated has a better prognosis than Syphilis one or two or three years old. Yet after say fifteen or twenty years in which the Syphilis has been quiescent the progno-

sis compares favorably with early Syphilis. The third factor is the presence of coincident disease other than Syphilis. No other factor, neglect of which will lead to more harmful results. In such diseases as tuberculosis, diabetes, and chronic nephritis, the Syphilitic infection should be of secondary consideration. The last factor to be mentioned is the social status of the individual. In this factor we are intimately concerned with the Syphilitic as a carrier. Potential parents should be considered as carriers and from a therapeutic point of view should be considered different from a senile individual who is no longer a potential parent, and who would hardly stand the rigors of an intensive treatment such as would possibly be directed in a young individual.

There are unquestionably many cases of old Syphilis that should not receive treatment. In this connection it is wrong to consider the Wassermann as an absolute guide to therapeutics. There are many patients who have received adequate treatment and lived useful lives, who so to speak have outlived their Syphilis and yet whose blood tests are permanently positive. These are grouped in the so-called Wassermann fast cases—many of whom it is surely a mistake to treat.

Quite apart from this group there is a group in which treatment is actually harmful. Paresis in its later stages should not be treated. Myelitis and Tabes in which there is great destruction of the cord are not benefited by treatment.

Seven cases of Syphilis representing the above types are illustrated in this article showing the ill effects of the routine treatment of Syphilis, and the article is concluded by the following paragraph.

In conclusion, permit me to emphasize that the first requisite in treating Syphilis is a complete survey and evaluation of the patient, not only from the side of his disease, but from the particular position he

occupies in society, from the side of what can be obtained by treatment, from the careful study of the predominating features of the disease, with due regard for the peculiarities of the particular system involved. Lastly, what I believe to be of paramount importance, the acceptance of the fact that the biologic test in itself is not of necessity an indication for therapeutic intervention.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

DUODENAL ULCER. CHOICE OF OPERATIVE PROCEDURE AND TECHNIQUE OF PYLORECTOMY.

The next important question is the type of operation. I could merely invaginate the ulcer and infold the adjoining walls over. This method, I am glad to say, is rapidly becoming obsolete, as it should. I could do a Balfour cauterization of the ulcer, perforating the duodenum and closing the perforation, or I could cut out the ulcer with the indurated area; or where the ulcer is small and favorably located a Finney pyloroplasty would be the best procedure; and, finally I could do that which I usually prefer when feasible—a pylorectomy, by amputating the duodenum below the ulcer-bearing area and amputating the stomach to the proximal side of the pylorus, invaginating both stumps, and finishing with a posterior gastro-enterostomy. When this is not feasible, owing to the presence of exudate extending some distance down to the second portion of the duodenum which would make it impossible to invaginate the duodenal stump, I do only a posterior gastro-enterostomy.

We will now open the lesser peritoneal cavity, locate, expose, and tie the coronary

vessels to each side of the ulcer. Having secured these vessels, I pass my left index finger into the lesser peritoneal cavity behind the pylorus and along the inner wall of the duodenum, when by directing the point of the finger forward, I expose and clamp the vessels supplying this portion of the gut, and sever them along the duodenal side of the forceps. I next clamp the gastrocolic omentum close to its attachment to the stomach itself. All of these vessels and also the omentum in the grasp of the forceps are now tied. In this way I have freed the portion of the stomach and duodenum to be removed; I then apply two rubber-covered clamps, one on the duodenum below the site of the ulcer and the other on the stomach close to the pylorus, along the greater curvature of the stomach and cut through the duodenum and the to the point where I will cut through the stomach with a cautery knife. The duodenal stump is first closed by carrying a chromic cat gut suture in a straight needle through the mucous membrane, then through the serous and muscular coats; the clamps on the duodenum are now removed and a purse-string suture of linen carried through the serous and muscular coats of the bowel a sufficient distance below the

end of the stump to permit invagination, after which the suture is tied. The stumps of the omentum including the ligated pyloric and duodenal vessels are sewn to the invaginated stump of the duodenum for the purpose of reinforcement, in order to guard against possible leakage. I next close the opening in the stomach by sewing the two layers of mucous membrane together with a continuous chronic cat-gut suture threaded in a straight needle, then the clamp is removed. The serous and muscular coats are then apposed. Any

spurting vessels should be secured by ligation. The final suture is a continuous Lembert of (properly speaking) Dupuytren suture of linen, which at each end picks up the stumps of omentum containing the ligated right gastro-epiploic and coronary arteries.

The above is taken from a recent article of that celebrated surgeon, John B. Deaver, Philadelphia, Pa. He handles the subject concisely and the description of the operative technique of Pylorectomy is admirable.

SOCIETY REPORTS

FIFTH DISTRICT MEDICAL SOCIETY Of South Carolina

OFFICERS:

Dr. R. G. Hamilton, President, Winnsboro, S. C.

*Dr. S. L. Allen, Vice President, Lancaster, S. C.

Dr. G. A. Hennies, Secretary, Chester, S. C.

COUNTIES:

Chester, Fairfield, Kershaw, Lancaster, York.

The semi-annual meeting of the district society held at the COUNTRY CLUB in ROCK HILL, S. C., Tuesday, June 12, 1923.

PROGRAM 10:00 A. M.

- 1—Opening Prayer—Dr. Alexander Martin, Rock Hill, S. C.
- 2—Address of Welcome—Mr. J. B. Johnson, Mayor of Rock Hill, S. C.
- 3—President's Address, Physical Exercise in the School—Dr. R. G. Hamilton, Winnsboro, S. C.

4—The Science of Medicine, a Progressive Science—Dr. L. O. Mauldin, President South Carolina Medical Association, Greenville, S. C.

5—Rural Health, an Index of Rural Prosperity—Dr. L. A. Riser, State Director of Rural Sanitation, Columbia, S. C.

6—Cranial and Intra-cranial Lesions—Dr. A. G. Brenizer, Charlotte, N. C.

7—Congenital Pyloric Stenosis with Report of a Case—Dr. G. H. Bunch, Columbia, S. C.

8—Occurrence of Ectopic Pregnancy with Report of Cases—Dr. E. Abell, Chester, S. C.

SUMTER COUNTY MEDICAL SOCIETY

Program of the Monthly Meeting
Sumter, S. C., Girl's High School Building,
Thursday, May 10, 6:30 P. M.

Call to Order by the President, W. S. Burgess, Sumter, S. C.

1. A Report of Several Interesting Chest Cases in Children, S. G. Glover, Greenville, S. C.

2. Cranial and Intra-Cranial Lesions (Lantern Slides). A. G. Brenizer, Charlotte, N. C.
3. Calcareous Changes in the Prostate Gland: Illustrated by Report of Three Cases. (Lantern Slides). H. W. McKay, Charlotte, N. C.
4. Banquet at Claremont Hotel.
5. Management of Posterior Position. G. Fraser Wilson, Charleston, S. C.
6. Nephritis. G. R. Wilkinson, Greenville, S. C.
7. Report of Clinical Cases.

GREENVILLE COUNTY MEDICAL SOCIETY

Regular Meeting Greenville County Medical Society—Hotel Imperial, Monday Evening, June 4, 1923.

One of the most pleasant meetings of the Greenville County Medical Society was held at the Hotel Imperial on the evening of June 4th. In accordance with the custom of the Society, this was the night for the regular quarterly banquet. There were seated about the table about 65 doctors and ten lay visitors. The doctors consisted of society members, several guests from the staff of the U. S. P. H. S. hospital, and the two invited speakers. The board of governors of the Greenville city hospital and representatives from the two local papers made up the Non-Medical guests. Dr. T. R. W. Wilson presided. At his right sat Dr. L. O. Mauldin, President of the State Association. Dr. S. G. Glover President of the S. C. Pediatric Association was present and as he was chairman of the committee on arrangements he took a very active part in the affairs of the evening.

Jazz music and good food, nicely served, was the first number on the program, following the invocation by Dr. Geo. Quick, a local minister and a member of the hospital board of governors. This proved to be a general favorite, and great appreciation to the committee was amply demonstrated. After cigars and cigarettes had got to going good, Dr. Wilson called the meeting to order and announced that the usual order of business would be dispensed with. He then introduced Dr. W. L. Dunn, tuberculosis expert from Asheville, N. C. who read a most delightful simple and at the same time highly instructive paper on "Practical Points in the Conduct of the Rest Cure in Pulmonary Tuberculosis." His audience was very attentive while Dr. Dunn in a very unassuming and quiet manner instructed them in some of the vital points in the management of tuberculous patients. Dr. G. R. Wilkerson opened the discussion which became general.

Dr. Wilson then introduced Dr. W. P. Cornell pediatricist, of Columbia, S. C. Dr. Cornell was an old time friend to many who heard him, for he was for 18 years professor of diseases of children at the Medical College of the State of S. C. Dr. Cornell read a very practical and valuable paper on "Acidosis". At the request of Dr. Cornell, Dr. E. D. Andrews, opened the discussion of this paper, Dr. Glover and others present also entered into the discussion.

Dr. Dunn, who has recently returned from a trip to Toronto, was asked to tell something of the story of insulin. He told in an interesting manner the story of its discovery.

J. D. Guess,
Secretary.

MINUTES

MINUTES OF HOUSE OF DELEGATES CONTINUED

The report of Districts were then received as follows;

1st District	Dr. A. E. Baker
2nd "	Dr. S. E. Harmon
3rd "	Dr. T. L. W. Bailey
4th "	Dr. L. O. Mauldin
5th "	Dr. T. N. Dulin
6th "	Dr. C. R. May
7th "	Dr. T. R. Littlejohn
8th "	Dr. L. A. Hartzog

These reports were received as information and the chairman thanked for their reports.

Dr. W. F. R. Phillips, Charleston, read the Report of the Scientific Committee. It was moved by the Secretary that the President appoint a reference committee to consider this report and report back to the House under the head of New Business. Motion seconded and carried. The President appointed on this committee;

Dr. Robert Wilson, Jr.
Dr. C. J. Lemon
Dr. S. O. Black
Dr. J. C. Harper
Dr. J. R. Young.

Dr. A. E. Boozer, Columbia, read the report of the Committee on Public Policy and Legislation. This report was received as information, the President thanking Doctor Boozer for his work in the Legislature in the interests of medicine in South Carolina.

Dr. Robert Wilson, Jr., read the Report of the State Board of Health. This was received as information.

It was moved by Dr. G. McF. Mood, Charleston, that the recommendation of the Board of Health regarding the prophylactic treatment of dogs against rabies be endorsed by this body, and that this body urge the Legislature to pass a bill making this compulsory. Motion seconded and carried.

Dr. R. G. Hamilton, Winnsboro, read the Report of the Committee on Health and Public Instruction. This report was received as information.

Dr. J. S. Fouche, Columbia, read the Report of the Committee on Study and Prevention of Tuberculosis. This report was received as information.

Dr. A. E. Boozer, Columbia, read the Report of the State Board of Medical Examiners. This report was received as information.

Dr. E. A. Hines made his report as Delegate to the American Medical Association. This report was received as information.

Dr. Milton Weinberg, Sumter, read the Report of the Committee on Study and Prevention of Venereal Disease. This report was received as information.

Dr. B. O. Whitten, Clinton, read the Report of the Committee on Mental Hygiene. This report was received as information.

Dr. F. H. McLeod, Florence, read the Report of the Committee on Hospital Standardization. This report was received as information.

Dr. R. A. Marsh, Edgefield, read the Report of the Committee on Necrology. This report was received and filed, and the House of Delegates stood for a moment with bowed heads in memory of departed members.

Dr. W. P. Cornell, Columbia, read the Report of the Committee on Child Welfare. This report was received as information.

Under the head "Reports of Special Committees" Dr. M. H. Wyman, Columbia, made his report as fraternal delegate to the Georgia Association in 1922. This report was received.

Dr. W. F. R. Phillips made the report for the Committee on special recommendations of officials. This report was referred to the Committee on Constitution and By-Laws which is to be appointed.

Dr. Robert Wilson, Jr., made the following report for the committee appointed to consider the Report of the Scientific Committee.

MR. PRESIDENT; Your committee makes the following recommendations.

That the Committee on Scientific Work consist of five members, composed of the President and Secretary ex officio, and three members to be appointed by the President. That the members (appointed) serve for a period of three years, provided that the committee be so arranged that the term of one member shall expire each year.

We further recommend that the arrangement of the program be left in the hands of the Committee, provided that two special subjects or symposiums be arranged, one for

each day, and that men specially qualified shall be invited to open the discussion of these subjects. That the remaining portion of the session be devoted to general papers and papers by invited guests.

Moved by Dr. C. L. Kibbler, Columbia, that this report be adopted. Motion seconded and carried.

Under the Head of "New Business" Dr. W. P. Timmerman reported for the committee on the Secretary's Report. Moved by Dr. N. B. Edgerton, Columbia, that this report be adopted. Motion seconded and carried. Dr. Timmerman's report follows.

We commend the Secretary for his interesting report. We approve the recommendation made by him that a committee be appointed to revise the Constitution and By-Laws.

We approve the formation of a Woman's Auxiliary of the South Carolina Medical Association, provided it involves no financial responsibility on the part of the Association.

Respectfully submitted,

W. P. Timmerman,
Chairman.

Dr. W. R. Wallace, Chester, moved that a committee of three be appointed to revise the Constitution and By-Laws. Motion seconded and carried.

Dr. A. E. Boozer made the following report for the committee appointed to consider Dr. Harmon's resolution.

The Committee on the resolution offered by Dr. Harmon recommend that the resolution be referred to the executive committee of the State Board of Health for such use as propaganda or otherwise as they may deem expedient in the matter.

Dr. A. E. Boozer moved the adoption of this report. Motion seconded.

Dr. M. H. Wyman, Columbia, moved that Dr. Boozer's motion be tabled. Motion seconded. A division was called for, and on rising vote the motion carried 28 to 16.

Dr. N. B. Edgerton, Columbia, read a resolution adopted by the Columbia Medical Association along the line of Dr. Harmon's resolution, and moved that the House of Delegates act on this resolution. Motion seconded.

Moved by Dr. W. P. Timmerman to amend by striking out the word "chiropractor" and substituting the words "various cults." The amendment was accepted and the amended

motion carried.

The Place of Meeting for 1924 was then considered. Dr. Green of Orangeburg invited the Association to meet there, and Spartanburg extended an invitation to come there. On vote, Orangeburg was chosen.

Dr. Green asked that the Orangeburg County Medical Society be changed from the Second to the Eighth District. On motion, this was granted.

The Secretary read a communication from the new Legislature Bureau of the American Medical Association. It was moved by Dr. G. T. Tyler of Greenville that this Association adopt the recommendations of this communication. Motion seconded and carried.

Election of Officers followed, the following being the result:

President, L. O. Mauldin, Greenville.

1st V. P., B. O. Whitten, Clinton.

2nd V. P., C. I. Green, Orangeburg.

3rd V. P., J. C. Harper, Greenwood.

Sec'y-Treas., E. A. Hines, Seneca.

Councillors:

First District, A. E. Baker, Charleston.

Third District, T. L. W. Bailey, Clinton.

Fourth District, J. R. Young, Anderson.

Fifth District, T. N. Dulin, York.

Seventh District, T. R. Littlejohn, Sumter.

STATE BOARD OF MEDICAL EXAMINERS:

J. H. Taylor, Columbia.

R. E. Abel, Chester.

Dr. Robert Wilson, Jr., moved that the press be requested not to publish the details of the discussion regarding chiropractors. Motion seconded and carried.

The newly elected President Dr. L. O. Mauldin was escorted to the Chair:

MR. PRESIDENT AND FELLOW MEMBERS: This privilege and honor which has been conferred upon me, an honor which has been handed down from year to year to the different members of the South Carolina Medical Association for the past seventy-five years, is deeply appreciated by me. The potential strength of the South Carolina Medical Association is so great that it is impossible to measure the scope of its influence, but it is a worthy organization, doing commendable and unselfish service to the profession and to the people of the Palmetto State, and as such I deem it a high honor to accept the position which you have offered me, I thank you.

(To be continued)



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VOL. XIX.

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PEDIATRICS NUMBER

CONTENTS

EDITORIAL DEPARTMENT:

- Comments on A. M. A. Meeting at San Francisco, June
25-29, 1923 -----529

ORIGINAL ARTICLES:

- Difficult Feeding Case Principles by W. P. Cornell,
Columbia, S. C. -----532
- Artificial Feeding of the Well Child During the First
Year by Wythe Rhett, M. D., Charleston, S. C.-----535
- Feeding During the Second Year by S. G. Glover, M. D.,
Greenville, S. C. -----540

(Contents continued on page ii.)

The Baker Sanatorium

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UROLOGY DEPARTMENT	545
SURGERY DEPARTMENT	546
DERMATOLOGY AND SYPHILOLOGY DEPARTMENT.....	547
PEDIATRICS DEPARTMENT	548
SOCIETY REPORTS	549
BOOK REVIEWS	552

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OF THE

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EDGAR A. HINES, M. D., Editor-in-Chief, Seneca, S. C.

ASSOCIATE EDITORS.

INTERNAL MEDICINE

GEORGE R. WILKINSON, M. D., Greenville, S. C.

PEDIATRICS

WM. P. CORNELL, M. D., Columbia, S. C.

OBSTETRICS AND GYNECOLOGY

R. E. SEIBELS, M. D., Columbia, S. C.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

ROENTGENOLOGY

FLOYD D. RODGERS, M. D., Columbia, S. C.

PATHOLOGY AND BACTERIOLOGY

H. H. PLOWDEN, M. D., Department Pathology and Bacteriology, Medical College of State of S. C., Charleston, S. C.

SURGERY

S. O. BLACK, M. D., Spartanburg, S. C.

EYE, EAR, NOSE AND THROAT

W. C. TWITTY, M. D., Rock Hill, S. C.

DERMATOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

PUBLIC HEALTH

LEON BANOV, M. D., Health Officer Charleston County, Charleston, S. C.

ANAESTHESIA

J. B. TOWNSEND, M. D., Anderson, S. C.

NERVOUS AND MENTAL DISEASES

B. O. WHITTEN, M. D., Supt. Training School for the Feeble-minded, Clinton, S. C.

EDITORIAL

COMMENTS ON A. M. A. MEETING AT SAN FRANCISCO JUNE 25-29 1923

The Secretary-Editor attended the meeting of the American Medical Association at San Francisco representing South Carolina in the House of Delegates for the thirteenth consecutive session of that body.

It is conceded that no place in America lends the charm for a meeting place that California does. It is safe to say that every full blooded American citizen dreams of such a visit, and now that rapid transit, the convenience of transcontinental journeys, and comparatively low fares to the west obtains, it is within the reach of many

thousands to visit this enchanted play ground of the world, and see its wonderful natural beauty and attractiveness.

Having visited California on two previous occasions including Mexico and Canada, and having seen most of the sights enjoyed by the tourist, the writer boarded the train at Seneca June 20th with the idea of making the fastest possible trip. The round trip was accomplished in 14 days, allowing ample time to attend all the A. M. A. meetings, and for the benefit of those who contemplate a similar trip the expense need not exceed two hundred and fifty dollars. Indeed, with economy the trip may be made on two hundred dollars. This would mean upper berths, two meals

a day enroute, and moderate rate hotels of course.

There is much of interest for the medical man along the Southern Pacific route. New Orleans is a medical center internationally known. There one finds the great Charity Hospital fostered by the State of Louisiana, also Tulane University with undergraduate and Post Graduate departments, and many other institutions of note. The Sunset Limited is a splendid train. It is ferried across the Mississippi on a monster ferry-boat about five miles below the city, and begins its long journey of more than two thousand miles. One sees here acres of tanks of the Standard Oil Company, each holding 55,000 barrels of oil for export. One also sees at anchor acres of silent ships of the emergency fleet of the United States Shipping Board.

The Southern part of Louisiana with its swamps and bayous interests the sanitarian as the problem of Malaria is a stupendous one. Louisiana has the largest rock salt mines in the world, and the train loads of sulphur indicate the magnitude of this industry.

The Sunset Route passes through the magic oil city of Beaumont, Texas. We are told that medical men are among the first as a class to be solicited by oil stock brokers. If this is true the doctor evidently encourages the game, for game it is. Texas holds much of interest for the physician. There are over six thousand doctors in this great state, and about four thousand members of the state association, about the same proportion of members and non-members as obtains in South Carolina. It appears that an inevitable minimum of good doctors all over the country are for one reason or another beyond the pale of organized medicine. It is unfortunate that we have not evolved a successful plan to overcome this situation. A thousand miles of deserts, ranches and waterless rivers leave a lasting impression of the vastness

of Texas. The cattle industry has suffered severely in recent years owing to low prices.

One welcomes a view of Old Mexico across the Rio Grande as the train speeds westward toward the Colorado, the crossing of which has for days been anticipated, and introduces the traveler to the snow capped peaks and fertile valleys of California. The crossing of the desert in midsummer is not comfortable but is bearable. The windows are closed to keep out the intolerable dust, the fans urged to greater velocity and iced drinks served (nothing stronger). To the Southern doctor the hardy cotton plants of California are worthy of note. Some day it would appear that California will produce everything that grows to delight even the most exacting representative of the genus homo.

Having explored Los Angeles and its environs (on two previous occasions the writer did not stop there, but continued on to San Francisco by the inland route, previously having chosen the route along the Pacific.

Everything was in readiness for the on coming thousands of American doctors. Even the weather was perfect. In recent years the House of Delegates has been quartered at the headquarters hotel; an admirable arrangement which facilitates not only business, but the close personal touch of officers and delegates at all times day and night. The magnificent Palace Hotel handled the crowds with perfect ease much to the delight of the guests.

Never in the history of the American Medical Association has there been a more satisfactory arrangement for the meeting of the various sections, exhibits, etc. All of them were held in the one vast civic auditorium. Perhaps nowhere in the world could this feature be improved upon.

Now that allied sections meet at different hours, for instance Medicine in the

morning and Pediatrics in the afternoon, the doctor has no loss of time in going from one section to another, and indeed browsing around in sections not so closely allied as the above mentioned. Such a plan is well worth while in order that the general practitioner and the specialist may touch elbows for the common good.

The scientific programs were most excellent; the scientific exhibits especially so. It is noteworthy that pathology came in for such enthusiastic presentation. Immense crowds hung on the words of the demonstrators. This is as it should be. One of the great attractions of the famous Vienna School has always been the extraordinary attention paid to pathology.

The work of the house of Delegates while not epoch making, marked progress toward saner views of the medicine of the future. "State Medicine" so menacing in the deliberations of two or three years ago has quieted materially. The house went on record, however, as opposing any attempt of the Red Cross to compete in any way with the private practitioners in the practice of medicine under the guise of preventive medicine.

The Council on Health was abolished and a Bureau of Health will take on this function with perhaps a salaried secretary. A field secretary for the general organization was authorized. The new Bureau of Legislation has made good in many ways.

Perhaps Medical Education came in for a greater share of investigation the past year than for many years. The House approved of more intensive plans for the proper education of the general practitioner in both undergraduate and post graduate schools. For the first time Post Graduate School classification was ordered published so that "he who runs may read." Much of the doctors hard earned money has been wasted in low grade post graduate schools for lack of the light of publicity from authoritative sources both

for the purpose of general instruction and special training. The A. M. A. will therefore exert its mighty influence to strangle the pseudo-specialist and also to protect the general practitioner.

Dr. Franklin Martin presented to the House a plan whereby the Gorgas Memorial may be completed.

It is significant of the conservatism of the medical profession that all the nine resolutions on the question of proper regulations for prescribing alcohol met the same fate—tabled.

The South has a prominent place now in the affairs of the A. M. A., Dr. Olin West of Tennessee is Secretary, Dr. Oscar Dowling of New Orleans is Chairman of the Board of Trustees. Dr. Welch of Ala. is a member of the Council on Medical Education, and Dr. Rankin of N. C. has had a prominent place in the Council on Health.

Dr. Musgrave of San Francisco with a masterly genius for details was the chairman of the Committee on Arrangements. Dr. Musgrave while a boy followed the plow in Tennessee. He was elected vice president. The president elect hails from the South. He is a worthy son of Kentucky, Dr. Wm. A. Pusey. For many years Dr. Pusey has lived in Chicago and was Treasurer of the American Medical Association for eleven years. Dr. Haggard of Nashville another southerner was the only other candidate. The election was very close. Dr. Pusey won by four votes.

The South Carolina doctors at the convention were Dr. James A. Hayne who read a paper on Diphtheria from the public health standpoint, and for which South Carolina is now known every where by virtue of the free distribution of antitoxin; Dr. Sosnowski formerly editor of the Journal, Dr. A. E. Baker and Dr. L. Rosa H. Gantt.

It was with pleasure that we found the exhibit of State Journals occupying a

prominent place just as one entered the great hall on the right. Our journal though published by one of the smallest states shows up well along with all the others. We had nothing to be ashamed of as the thousands of doctors passed this booth.

The association meets in Chicago next year when the new addition to the headquarters will be completed.

The writer returned via Chicago on the

Overland Limited one of the world's most famous trains. On this train were the general officers of the Association including several Trustees, the Surgeons General of the Navy and Public Health Service both Southern men, Gen. Stitt of the navy from S. C., Gen. Cumming of Va. and many other distinguished physicians. The entire trip means a journey of nearly seven thousand miles.

ORIGINAL ARTICLES

DIFFICULT FEEDING CASE PRINCIPLES

By W. P. Cornell, M. D., Columbia, S. C.

By the South Carolina Pediatric Society and submitted in the hope that some assistance will be given those general practitioners of our State who may have to worry and fret with the occasional difficult feeder.

Possibly no condition of infancy presents such a multiplicity of causes nor calls for more study and patience in correctly determining the correct etiology.

Difficult breast-fed cases usually presents mainly one of two clinical types, either a dyspepsia or colic, or else an under-nourishment or hunger.

In dyspepsia we have clear evidences of too much food having been taken. The infant holds its weight if it does not actually gain; its stools are normal in number or too frequent; evidence of sufficient fluid (milk) intake is shown by free micturition, and evidence of food in the digestive tract is given through gas formation and its passage up and down. Weighing the baby before and after each nursing for

a day will show just how much food it is getting.

The almost invariable cause of dyspepsia is too frequent feedings (the old time two-hour intervals) which results in the baby getting too many strippings from the breast which means a total excess of fat for the day with resultant colic from fat fermentation.

Treatment consists of first lengthening the intervals of nursing. If this doesn't bring about relief give before each nursing one-half of a small package of Mead's Casec in one-half ounce of water immediately before each nursing, for several days and, if the colic still persists, follow Grulee's practice and give one drachm of liquid B. B. Culture in sweetened water night and morning. Finally, if need be, the mother's milk may be expressed and set until the cream rises when it is removed and the skim milk fed to the baby until the mother's milk is made less rich by cutting down the fats and proteins of her diet, and by having her take more exercise daily to the point of feeling tired.

Under-nourishment or hunger must be recognized early by the use of the scale and weighing the baby before and after feedings to find out how much milk it gets per day and if deficient the baby must at

once be fed after each nursing enough from a bottle to maintain its strength and weight.

The cause of under-nourishment may exist in the baby through cleft palate, or tongue tie; congenital weakness, or prematurity so that it cannot successfully nurse the breast. The causes on the mother's part may be psychic, through fear of nursing because of the pain from cracked nipples; through worry over a non-thriving baby; or from distaste because of the regular nursing periods interfering with social pleasures. Physical causes may be depressed nipples or a deficient milk supply.

To increase the mother's supply of milk her diet must be a generous one of the foods that she likes, with sufficient fluid intake, preferably milk or cocoa, she must have plenty of rest, and she must strip her breasts after every nursing to stimulate them to secrete.

The difficulties encountered in feeding babies to overcome eczematous conditions will often be overcome when, after stool examination reveals a distinct fat excess, the treatment outlined above for dyspepsia is instituted in addition to the local applications. In other cases skin reaction to the different food stuffs reveals the cause of the baby's eczema and these foods must be eliminated from the mother's diet.

Disturbed rest of the infant frequently results in feeding difficulty, the baby not thriving on an apparently proper diet. Common causes for this are: Too much clothing or bed covering; too hot a sleeping room; too tight or misplaced abdominal binder; wet napkins allowed to stay on, especially if there is too much chaffing, and particularly if there is ammoniacal decomposition of the urine with its burning effects. In this latter, the napkins should after they have been washed and rinsed in plain water to remove the soap, be again rinsed out in a one to five-thousand solution of bi-chloride, wrung dry by hand, and

hung up to dry and so applied. The bi-chloride kills the germ in the stool which breaks down the urea of the urine and liberates ammonia. Again, disturbed rest with resultant under-nourishment may come from a granuloma of the umbilical stump which must be tied off and removed before the baby will thrive.

Rickets may take months to develop objective signs such as the square head, rosary, Harrison's groove, ringed wrists and bent long bones. Its earliest symptoms are: Restlessness at night, head sweating, pallor, convulsions, and under-nourishment with stationary weight. Its cause is still under discussion, but cod liver oil and exposure of the naked arms and legs of the child to direct sunlight, will generally promptly take the baby out of the class of difficult feeder.

Pylorospasm is diagnosed by the character and intensity of the vomiting; by evidence of retained food in the stomach over the normal feeding intervals, and by seeing the gastric waves passing from left to right. Its continuance will make feeding impossible; its cause is undetermined, and its treatment consists in giving atropine in ascending doses and the feeding of thick cereal gruels alternating with breast milk. Pylorospasm may not develop for some months after birth.

Pyloric stenosis, being a congenital defect, usually appears in the earliest weeks of life and, once started, generally progresses rapidly with resultant imminent danger of acute starvation to the baby. Its only treatment consists in prompt surgical relief of the obstruction. The only guide in either pyloric spasm or stenosis is the baby's daily weight curve. If the scale demonstrates a loss for several days operation should not be put off as that stage of acute inanition from which no baby can return can come on very rapidly.

Straining is another symptom in the presence of which a baby may soon enter

the difficult feeding class. Rectal ulcer, or polypus may be present, but the most frequent causes of chronic straining, to my observation, have resulted from urinary tract disorders. In boys small meatus with adherent prepuce, and in girl babies pyelitis, have been the causes to remove before feeding became easy. Very recently a two and three-quarter years old girl-child was referred to me who had been straining daily for nine months and having ten to fifteen stools—every strain resulted in a stool. She would cry out and point to her perineum in the attacks. Diagnosis of stone in the bladder was confirmed by X-Ray, and removal promptly converted a difficult feeder, who was emaciated almost to the point of death, into a simple case.

Artificially fed children are frequently upon almost exclusive starch diet and sweets with resultant loss of tolerance for these, and for fats and protein at the same time. Their stools show, upon staining, unchanged starch in excess and iodophilic bacteria. The abdomens of these children are usually distended as part of their generally weakened, flabby musculature, and they present emaciation with a dry, dusky skin of a brownish discoloration. These are indeed difficult feeders, having consumed their own body protein and fat, and upon our attempts to increase their diet they vomit and purge. In these cases we meet with the greatest opposition from the parents who, not realizing the tissue needs of the child, base their whole ideas of progress upon the number and character of the stools. These children must have both fats and protein in order to live, and again the daily use of the scale is our only guide as to whether or not they are absorbing enough food. In the presence of a cessation of weight loss, our first encouraging sign, the weight curve stops going down and flattens out and soon may show an upward curve. When this happens, no matter what the stools look like,

or what symptoms of digestive upset are present, the child is absorbing food and it must be continued on the diet. It is the child's body we are treating and not its digestive tube, which is simply a reservoir actually on the outside of its body, though passing through it, from which food passes into the tissues. The malt-soup preparations seem to me to offer the best means of getting these cases started correctly.

The older, spoiled child presents another and puzzling type of the difficult feeder. This type I described in our State Journal of October, 1922, under the heading "That Scrawny School Child" and will only add here that the condition is a distinct entity and that if the parents will co-operate honestly the results of the treatment there outlined will give satisfaction to all.

Excessive secretion and swallowing of saliva, as seen in some babies who constantly suck the rubber nipple, and in those older children who live with a cud of chewing gum in their face between meals, at times brings about dyspeptic symptoms for which changes of diet alone does not bring the expected relief.

I cannot "pass up" the ill effects of frequent dosage with the purgative drugs, which keep the child so emptied that not enough food stops in the ilium to absorb into its body and maintain weight. A mother told me recently that she had kept her baby, aged four and three-quarter months old, alive for three months by giving it daily a dose of castor oil. It had gained only one pound in that time, is now wrinkled with marasmus and dehydrated, and the wonder is that it has lived this long as most of the breast milk has been promptly passed out of its body before it had time to absorb.

Each marantic infant presents its individual difficulties as far as I can see. No one method of treatment or of feeding will work on all cases. One thrives on mercury; another on thyroid extract;

another on oil massage; one on this food and the next on that. The theories of causation are many and varied but the one that appeals to me as most plausible and workable is that which considers these cases as having a lowered absorptive capacity for all foods, and which capacity is still further lowered by feeding them more than they can absorb, which results in still further loss of weight. These marantic infants are demineralized and dehydrated also, and they cannot stand the preliminary starvation period with which treatment of the acute digestive upsets is started, nor the preliminary purge. These cases need both fats and protein, but about the only form in which fats can be tolerated and absorbed is when it is given in the form of protein milk, with which too, the carbo-hydrates may be given in higher percentage than with other milk preparations. The weight curve should be watched daily as the only indicator of the nutritional state and, until the weight loss stops the daily quantity of food must be kept low. Upon flattening of the weight curve the food may be slowly increased, keeping within tolerance. Sudden increases of food cause loss of weight. Dehydration calls for intraperitoneal injections of saline, which may be repeated each twelve or twenty-four hours as indicated. Body warmth must be maintained by artificial heat if necessary. Intraperitoneal transfusions with citrated blood, typed, as recently advocated by Drs. Siperstein and Sansby, may be found to fill an urgent need in this condition, though as yet this has not been used for this purpose.

The premature infant offers feeding difficulties in part because of the deficiency of iron in their system due to their prematurity, and because milk, both human and cows, has practically no iron in it. Blood transfusions should fill this need nicely I should think.

The main thing then, in the difficult

feeding case, is to find the cause or causes and remove them. The infant's natural tendency is to overcome troubles and live, and if we can find and remove the obstructing impediments we will be often surprised at the food stuffs they can successfully negotiate.

ARTIFICIAL FEEDING OF THE WELL CHILD DURING THE FIRST YEAR

By Wythe Rhett, M. D., Charleston, S. C.

This paper is not presented with the idea of bringing forward any new or original ideas on infant feeding, but is an effort to stimulate more interest in this subject among physicians in general practice. A great many physicians apparently give little thought to infant feeding and are content, when it becomes necessary to feed an infant artificially, to consign it to the tender mercies of the directions on a can of one of the proprietary foods. An operative mortality of 15 to 20% would give them grave concern, yet the mortality among infants in the first year in many of our cities is about that figure, the vast majority of these being artificially fed babies. By proper supervision and feeding very many of these babies may be saved. The feeding of normal babies does not offer very serious difficulties, if the same thought is applied to it as is given to other classes of cases. The methods of modifying milk are simply the mechanical part of infant feeding and a very little study renders the calculation easy. The really difficult part, the part that requires judgment and experience and which even then often results in failure in the best hands, is the abnormal feeding case. As Hill states it is the difficulty in these of "knowing when to feed what". The normal baby offers no such problem.

The subject of artificial feeding is con-

tinually under discussion and is still a live subject. There are a great many methods of feeding in vogue and opinions are constantly changing and developing, as more is learned each year concerning the fundamental nutritional processes of the infant. In general however, so far as the feeding of well babies is concerned, the trend of recent years has been rather steadily toward simplification. A healthy infant can adapt itself, in a large measure, to widely varying artificial diets. This accounts somewhat for the success of numerous men using very different methods. Hence you will find most liberal minded authors freely admitting that there is no one way to feed an infant, but the fundamental facts are that they must be given a food that will furnish body needs for heat, repair of waste, and normal growth, and that this must be furnished in a form that the baby can digest. These demands may be met in a variety of ways, hence the number of different methods of feeding.

Cows milk properly modified is the best substitute for human milk available for general use. The digestion of all perfectly healthy infants is much alike and in general they can be fed in about the same way. This does not apply to other than normal infants. The simplest formulas are in the average cases the best, in that they are more apt to be of uniform quality from day to day, as prepared in the home by the mother or nurse.

Clean whole milk is desirable above all things but unfortunately under present conditions this millenium has not been attained in South Carolina. At present the available milk supply in most of our Southern Cities is unsafe for babies during a large part of the year. However this can be remedied by the simple process of boiling from 3 to 5 minutes. This should certainly be done from about April 1st to December. The danger of scurvy from boiled milk may be removed by giving at

least an ounce of orange juice daily. It is the opinion of many eminent pediatricists that milk sterilization during the summer months has done about as much as any other single factor in lowering infant mortality. The development of powdered milk has been a step forward in the solution of the milk problem where it is impossible to get clean milk, since by the addition of appropriate amounts of water a safe whole milk may easily be reconstructed.

Formulas from whole cow's milk are the simplest possible, being derived by simple dilution with water or cereal gruel, with addition of sugar. In the South during hot weather, fats are, as a rule, poorly digested by babies, hence whole milk formulas, with their relatively lower fat content have an additional advantage for this climate. Top milk formulas or skim milk and cream mixtures have certain advantages for infants with good fat digestion in winter or in higher altitudes. In general however, in this section of the country, the high fats are seldom justified in the feeding of the average baby. A fat intolerance once established, is very persistent and often converts the baby into a difficult feeding problem.

In a breast fed baby there is usually a certain automatic adjustment between the needs and the amount consumed by the infant, and even when this amount is exceeded the human milk factor is the saving grace which prevents serious harm as a rule. If the amount is insufficient this is reflected in the rate of gain. In the artificially fed infant things are not so simple; the individual requirements of the infant should be determined as nearly as possible. The food given is intended by nature for another type of animal and an excess or a deficiency may do much more harm to the infant than in the case of breast milk. The best results are seen when no more than body needs are supplied.

The physician must be familiar with the food elements concerned in infant nutrition; that is, fats, sugars, protein, salts and water, and should know the approximate composition of the milk formula used. He should preferably have several methods of milk modification at his command, so that he can, when necessary combine these elements as desired to meet special indications. The needs of the infant, stated in calories, should first be determined; then taking into consideration the necessity of providing adequate amounts of the various food elements, the best form in which to supply these needs should be decided.

The food requirements of the average healthy baby are about 45-50 calories per pound of body weight, during the early months, and 35-45 during the latter months of the first year. Hence the weight is the most important single factor in feeding normal babies; but age, size, appetite and general behavior enter into the individual case. The food needs based on weight alone are useful as a guide until the individual factor can be determined.

The calculations of calories in whole milk formulas are easy and can be done in a few minutes. A very simple method of calculating a whole milk formula for an average healthy baby on the basis of caloric requirements is given by Holt, and may be illustrated by the following example: It has been found that it takes 1 1-2 oz. of milk per pound of body weight to furnish the protein requirements for a baby. Thus an infant weighing 12 lbs., will require 18 oz. of milk. The caloric needs of this baby calculated at 45 calories per pound will be 540 calories. Of this, the 18 oz. of milk (containing 20 calories per oz.) will furnish 360 calories, leaving 180 calories to be made up by carbohydrates. One ounce of sugar will add 120 calories, or 1 1-2 oz. will add 180 calories. This will give the required food

for a day. For convenience the sugar may be prescribed in level tablespoonfuls instead of ounces. It takes two level tablespoonfuls of cane sugar to make an ounce, and three level tablespoonfuls of milk sugar or Dextri-Maltose, these being the three types of sugars most commonly employed.) The next step to determine is the amount of diluent to add. The daily fluid needs of the infant have been shown to be about three oz. for each pound of body weight in the early months and two oz. for each pound in the later months of the first year. Thus for the 12 lb. baby it will be about 36 oz. per day. Therefore there will need to be added 18 oz. of water and the resulting formula would be.

Milk 18 oz. -----	360 cal.
Sugar 1 1-2 oz. (3 level table- poons) -----	180 cal.
Water 18 oz. -----	

Total -----	540 Cal.
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This may conveniently be divided into six feedings of 6 oz. each. Using a 4% milk the approximate percentage composition of this formula would be Fat 2%, Sugar 6%, Protein 1.75%.

During the early months of the first year the 3-hour interval between feedings in the day and 4 hours at night is probably preferable. After the third or fourth month, feeding between 10 P. M. and 6 A. M. may usually be omitted, and by the sixth month at least, the baby may be fed at 4-hour intervals during the day. The reduced number of feedings is compensated for by an increased amount at each feeding. The stopping of the night feeding and reduction in number of feedings is also a great saving of labor for the mother or nurse.

Practically every text-book of pediatrics gives tables of formulas for use in infant feeding, illustrating the various methods. They are useful as illustrations, and used intelligently are intended only as guides to

show the steps by which strength and quantity of food may be increased. The figures given represent averages, and are not intended to mean that all babies at any given age must have the formula indicated for the average baby of that age in the table. To attempt to follow any table rigidly violates the fundamental principle of intelligent feeding, which is to adapt the food to the child's requirements and powers of digestion at the time. The table should be used merely as an illustration and a very little study will enable a physician to master the steps by which the food should be increased and enable him to apply the principle to the feeding of individual cases as they arise.

The mistake is most often made of making the formula too strong at the beginning of artificial feeding. Having decided to put a baby on cow's milk one should begin with a lower formula than would be indicated by its caloric requirements. The food may then be gradually increased in strength and quantity according to the child's digestion until its needs are satisfied. With an older infant the increase may be made more rapidly than with a young baby, as soon as it becomes accustomed to cows' milk. A stationary weight or a loss of a few ounces over a period of a week or two is of little consequence, if the change in food is effected safely, because without digestive disturbance at the beginning, a gain is reasonably assured as soon as food is increased to meet the requirements of the individual baby. By observing the weight frequently during this period the caloric requirements of the individual infant at that time may be established, since it will correspond to the amount of food necessary to begin a satisfactory rate of gain (other factors of digestion, etc., being normal.)

The rate of increase necessarily will vary with the individual baby. With a strong child above average weight, with

good digestion, the strength and quantity may be increased more rapidly than with a smaller less hearty infant. Gain in weight is one of the most important guides, but if made the chief concern, there is a tendency to increase the food regardless of other conditions, frequently with serious digestive disturbances. The child's demonstrated power of digestion is the best guide to increasing the food. If hungry and digesting well it is usually safe to go ahead, but as a general rule not oftener than every 2 to 4 days during the early months and every week during the later months of the first year.

With a new born baby the strength and quantity of the food should be increased every few days during the first few weeks. It is best to alternate, first increasing the quantity then the strength, etc. In increasing the quantity it is best to add not more than 3-4 oz. to the food for the day, or $\frac{1}{2}$ oz. to each feeding. The increases in strength should be made gradually, not more than 1 oz. of milk to the day's feeding. Thus if the formula given calls for milk 15 oz., sugar, $2\frac{1}{2}$ level tablespoonfuls, water, 15 oz., feeding 5 oz. every three hours for six bottles, and it is desired to increase the quantity of fluid the next formula might be.

Milk 15 oz.

Sugar $2\frac{1}{2}$ level tablespoonfuls.

Water 18 oz.

Feed $5\frac{1}{2}$ oz. as above.

The next step might then well be an increase in strength with the following formula:

Milk 15 oz.

Sugar $2\frac{1}{2}$ level tablespoonfuls.

Water 17 oz.

Many of the failures in infant feeding are due to the failure of the physician to keep in close touch with the case. For the first few weeks the baby should be seen every few days and it is only by such observation that he can see how directions

are being carried out and make the changes necessary to meet requirements at this stage. When gaining steadily a weekly visit may be sufficient, later a bi-weekly and in the latter months of the first year at least once a month. If the condition of the infant is unsatisfactory the visits should be more frequent than outlined above. Success depends upon systematic observation, explicit instructions, and intelligent co-operation by the nurse or mother, as well as by intelligent use by the doctor of information given by the symptoms of the infant. Directions should be clear and in writing so as to avoid mistakes on the part of the attendant.

Almost no infant will remain absolutely normal throughout the first year, even when properly fed, and it is necessary at times to make changes in food to meet special symptoms as they arise. Hence the importance of frequent observation is evident, since early recognition and changes to meet these minor disturbances usually avoids the more serious digestive upsets. (The physician should familiarize himself with the character of the stools resulting from disturbances of digestion of the various food elements. The description of their character may be found in any text book of pediatrics.) The strength of the food should be reduced in attacks of any acute illness such as rhinitis, bronchitis, tonsillitis, etc., even though the course is mild. Hot weather has a markedly depressing effect upon young infants and in excessive hot weather the strength of the food should be increased and more water given. The fats and sugars should be reduced especially. This can be accomplished in whole milk formulas by partially skimming the milk, or by reducing the total number of ounces of milk with a corresponding increase in water to make up the total fluid, and by reducing the sugar added to the formula. A gradual return to the original formula may be

made as soon as the period of excessive heat is past.

After the second or third month every baby on artificial feeding should be given at least one ounce of orange juice per day, or its equivalent in other anti-scorbutic agencies. An infant normally develops some capacity to digest starch at least by the third month so that it is well to add barley water or other cereal gruel to the formula at about this time. The cereal flour should be cooked 15 to 20 minutes in the water used as diluent in the formula. This may be begun with one level tablespoonful of the flour and increased gradually to 2 or 3 level tablespoonfuls or more if desired later for special reasons. Usually by 8-9 months, and earlier in some large vigorous babies, with good appetite and digestion, almost any form of well cooked cereal may be fed with a spoon. I usually increase this gradually up to two to three tablespoonfuls of cooked cereal at the 10 o'clock feeding in the morning. In the average normal infant a formula of whole undiluted milk may be reached about the 9th-11th month. Beef juice may be given in amounts of 1-2 oz. by the 5th or 6th month. I do not think that any baby requires more than a quart of milk per day. If not satisfied with this amount of milk it is usually time to add other foods, first the cereal as outlined above, later a vegetable puree or a broth and toast or zwiebach.

It has been said that all bottle fed babies have a little rickets and it is true that many babies normal otherwise have a slight rosary and somewhat delayed dentition. In the vast majority of cases this is the extent of the rachitic process, if one exists, but when these findings are present it is a good plan to give such babies cod liver oil in doses of 10-20 drops three times a day and to watch for the possible development of other signs of rickets.

FEEDING DURING THE SECOND YEAR

By *S. G. Glover, M. D., Greenville, S. C.*

If I had been allowed to choose my subject it would probably have been something dealing with diseases of childhood, but being assigned a subject by the South Carolina Pediatric Society, and having to present it, I believe it is about as important as anything pertaining to children because: About 46000 babies were born in South Carolina last year, and approximately 4233 under one year of age and 5878 under five years of age died last year in South Carolina. 28.5% of all deaths in South Carolina are of children under five years of age. Summer Diarrhea is the scourge that yearly slays thousands of our babies. If we would reduce our appalling infant mortality rate which has been about 113 per 1000, but for 1922 was 92 per 1000, which is higher than any state in the Union (compared to New Zealand 40 per 1000, and the United States at large about 90 per 1000) we must eliminate this disease, one of the main causes of which is careless, wrong, over or under infant feeding.

An article by James Burnett of Edinburgh on infant feeding in the February issue of the Archives of Pediatrics deals with a subject of much interest to me especially one paragraph that expresses my thoughts on the subject and should concern our State at large. "I have stated that the only proper substitute for breast milk is that of the cow. I do so after more than 20 years devoted to the careful study of infant feeding and observation of the methods of others both in this country and on the Continent. From what I have seen I become daily more and more convinced that the sooner we as a

profession adopt the attitude that the only proper substitute for breast feeding is fresh cows milk the better will be our results in the matter of infant feeding. Unfortunately it is my experience, as it must be of other pediatricists, that medical men habitually order such things as dried milk and artificial foods. Let me say that the latter are entirely misnamed, as in many instances infants so fed are often actually starved. If, therefore, in speaking of such substances in this article we call them "foods" we do so because they are commercially known as such. All these things are most pernicious, and should be avoided in all cases. They are advertised largely, and often most immoderate claims are made by their manufacturers regarding them. The public, and sad to relate even members of the medical profession, believe everything they see in print with the result that the sale of such articles is enormous. No one ever hears of the mischief they produce. No morning newspaper would publish articles of protest against their use, and even few medical journals would print anything denouncing them. This commercialism has invaded even our scientific press. This does not stand to their credit. No high class medical journal publishes advertisements of quack remedies, and yet its pages may contain matter relating to infant foods, all of which are composed of more or less unknown ingredients. In our opinion it is as unethical to advertise certain foods as a safe substitute for breast milk as to print an ad of certain pills as a cure for indigestion. Medical men are carried away by such advertising matter, and by the exaggerated claims put forward by the manufacturer, who is after all only a layman and naturally enough thinks only of his wares as a means to ultimate wealth. The more he advertises the more his goods sell, and the wealthier he is the more ready is the press, both lay and scientific, to accept advertis-

ing matter from him. This, surely, is commercialism prostituted to an extent which can only be deplored and condemned by a right-thinking public and profession. It is, again, the duty of the State to take the matter in hand, and see to it that the sale of commercial substitutes for fresh cow's milk should be properly and strictly controlled for they merely serve to enrich their makers at the expense of the infant population. No infant so fed is ever quite healthy when judged by recognized standards. The great majority develop rickets, while no doubt many are so weakened that they readily succumb when attacked by acute disease. In order to prove my contention that dried milk, artificial foods, and even condensed milk (when used other than as a temporary measure) are far from being satisfactory I append brief notes of a few cases selected at random."

Since specializing on children's diseases I was in a very busy general practitioner's office one day "talking things over" when his telephone rang and it proved to be a mother asking this physician what to feed her two year old baby. His reply was "Oh-feed him-feed him-anything," and I suppose she did because it was the physicians advice, and I suppose the physician thought no more of it, as he believed he had told her what to feed the child. Now I know he did this unthinkingly but my contention is that you should tell the mother the names of the articles of diet, because it is prescribing just the same as saying give the child a teaspoonful of this, or that, medicine every three hours, you do not say give a teaspoonful "Oh-any-any time."

I once heard it said that the definition of a baby is "A stomach entirely surrounded by curiosity."

The dreaded "second summer" robs many homes because of ignorant or careless parents. The second summer approached properly is hardly more dangerous than any other summer during the

early years of a child's life. It is almost a universal custom when the child is weaned or given something other than a milk diet, to allow him "tastes from the table." Very often these tastes comprise the entire dietary of the adult. Milk is oftentimes the only suitable article of diet that is given. Eventually, not only is the other food selected unsuitable, but it is given irregularly and supplemented by crackers kept on hand between meals. During the hot summer months the gastro-intestinal tract is less liable to bear such abuse and the child becomes ill. Whatever opinion one may have as to the advisability of recommending heated milk rather than raw milk for infant feeding as a general practice, it must be recognized that the earlier teachings in America concerning raw milk feeding led to the production of certified milk, with a resulting decrease in infant mortality. However, it should be emphasized that any method of food preparation which may tend toward an erroneous feeling of security is to be avoided.

This applies particularly to milk production, as it is obvious that unclean milk cannot be considered a safe food for infants, even though it is pasteurized or boiled. In large communities, certified milk from properly inspected dairies is the only milk which may be fed raw with any feeling of safety. During the warm months even certified milk should be pasteurized or boiled in the home. In small communities, when the milk has been produced under sanitary conditions and reaches the home a few hours after milking, it may safely be used. When there is any doubt as to the quality of milk it should be brought to the boiling.

As for the diet during the second year you have several things to take under consideration: "The baby's condition on entering the second year. If its weight at 12 months is say 21 lbs. or about normal the baby should be weaned. A baby in

good condition could have a more varied diet, also, the time of the year plays its part whether winter or summer, (it goes without saying more and heavier in winter and much lighter in summer, but taking everything into consideration the diet would really have to be divided into two periods: 12 to 15 months and 15 to 24 months, because there are some things we can give more freely after 15 months. Therefore feed the baby four times a day 7 A. M., 10 A. M., 2 P. M. and 5 or 6 P. M., giving within reason the following:

Fruits: Orange juice, stewed prunes, stewed peaches, baked apple, apple sauce, sweetmilk (boiled), buttermilk, chicken or beef broth with rice cooked in it thoroughly, oatmeal, cream of wheat, hominy grits, rice cooked at least two hours, irish potato baked and mashed or creamed, crackers, toast, bread and biscuit, butter. One does not usually give an egg before fifteen months. Some children handle eggs better than others, and they are given coddled, soft boiled, poached, hard boiled (8 minutes) mashed fine. Vegetables are rarely given before 15 months and they consist of spinach, celery tips, carrots, field peas, string beans, cooked thoroughly and strained through a sieve or colander. Baked sweet potato is hard to digest and it is not advisable before 15 months. Meats like breakfast bacon can be given from 12 to 15 months if crisp, but the heavier meats like chicken, steak, mutton chops and lamb chops minced fine, roast beef scraped, not until at least 15 months. Of course there are in my opinion very few additions to this diet from 15 months to 2 years of age, but these foods may be given more freely with the exception of meat which should not be given more than once a day and twice a week would be more preferable.

Before closing I wish to say that certain kinds of candy like lemon stick or pure sugar candy are permissible in moderation.

Also a child up to 2 years of age should not be given ice cream but if it is done it should be made at home of pure milk, and only vanilla flavor.

I also wish to mention a few features in the progress of better feeding of children, namely, the development in our city of a food depot or dispensary for the benefit of either the poor or the rich who wish to take advantage of properly prepared food for infants according to physician's prescriptions. This is the first of its kind started in the state at any rate the first I know of. Here the prescribing physician's formula is taken and each day the food is prepared according to that formula and the parents call or send for it which is given them at cost, and those unable to pay get it free. In this way they get good clean milk and thoroughly cooked food. The same principle applies as in the case of a physician's prescription at a drug store.

DISCUSSION OF SYMPOSIUM ON INFANT FEEDING

Dr. R. M. Pollitzer, (Charleston):

The South Carolina Pediatric Society is offering you these papers with the purpose of advertising itself, or its members, and in the hope of doing some good. I also want to say that we fully realize that artificial feeding had been written about so much that most of you do not want to hear any more about it; but nevertheless we offer the subject, because we feel it is worthy of consideration. When you realize that 14 per cent. of all deaths in this country occur in the first year of life, and 16 per cent. in South Carolina, you must see that the first year is very important and that the loss of life is tremendous. Therefore we do not hesitate to say that the most of that loss is from improper artificial feeding, and the vast majority would have been saved were they fed with a little common sense. It does not require the services of a specialist; it simply requires common sense and experience and the cooperation of the mother, and let me tell you it is the rarest excep-

tion that you do not get that cooperation during the first year.

Also the men who write text-books (and doubtless anybody who is anybody in the pediatric world has written a book. I have not) will tell you that they follow an invariable rule. Let me tell you that I follow an invariable rule, and that is to have no invariable rule. Every baby is a law unto itself. Nevertheless there are two prerequisites, just as in all branches of medicine there are certain things you must know, so in feeding a baby, if you would be a success, you must know the baby, and you get your knowledge by the history of the baby, then by the physical examination, and nothing can take the place of that physical examination. Second, you must know the food that is going into the baby, and after that you have to know the right food for the particular baby, and the mother will beat you to it, there. You must know the caloric composition of your food, you must know the caloric value, whether the food has vitamins, and what it does have. You must know a little about cooking. It would not hurt you to go into the kitchen occasionally. Proper time and thought must be put on feeding. No great tax is put on the general practitioner in feeding the baby; nevertheless, if he cannot learn to feed the baby and leaves it to the mother to take it out of a book or magazine, or learn it from a neighbor, he is not doing his duty, and he should refer the baby to someone who does know how to feed a baby.

DR. M. W. BEACH (Charleston):

The subject of the artificial feeding of the infant is an important one and of interest to every member of the profession, more especially the general practitioner, for it is he who is responsible for the care and supervision of the artificial feeding of the baby. Furthermore, the time is fast passing when the mother will be contented to artificially feed her baby by such meagre directions as are handed out by the manufacturers of proprietary foods. Laxity in the regulation of the feeding of the infant during its early months is one of the greatest obstacles for success. In this period of time the pathological foundation is laid upon which many nutritional disturbances develop. I see no reason why anyone should find it difficult to

write a milk formula for the normal infant, if he keep in mind the facts of the fundamental principles of infant feeding. We are all familiar with the requirements of the normal breast-fed baby. It will grow and develop with a given quantity of breast milk in the twenty-four hour period. Therefore if we can in some way mechanically modify cow's milk in such a way that the resultant formula will be, first, simple in construction; second, embody all the necessary food elements; and third, applicable in any home, we have overcome one of the chief difficulties in artificial feeding of the normal infant, although here, as in other phases of infant feeding, individualization is the keynote of success.

DR. D. L. SMITH (Spartanburg):

Since the Ladies Home Journal, Good Housekeeping, and all those magazines have taken it upon themselves to educate the mother in the care and feeding of the baby, I think we have had more trouble than ever before. Every mother has read all these articles, and she thinks she knows more than the doctor. I think the little knowledge they get from these magazines makes more trouble among the babies than the good derived from them. The mother who has been studying these magazines knows just enough to make trouble. Her mental condition is such that she is worried, and I think that is the chief point in the colicky baby—the mental condition of the mother. She knows just enough to worry, and she has a little misgiving about calling the doctor because she is afraid he does not know as much as she does. The doctor, and especially the general practitioner, realizes this now, and is beginning to inform himself and is anxious to beat the Ladies Home Journal to the mother and the baby.

The first and most important thing when a child is brought in with colic, is thorough examination of the child. I have seen numbers of babies who were suffering, and after examination we found they had a cleft palate, or some trouble with the navel, as Doctor Cornell brought out in his paper, or we might find another condition which I saw in one child, a case of congenital hernia that had been carried around from one doctor to another, and the mother always made

the diagnosis—colic. The doctor did the more intricate thing of prescribing medicine, instead of examining the child. It had passed through the hands of nine doctors—diagnosed by the mother. Reducing the hernia reduced the colic.

The second most important thing in these colicky babies is to establish a regular hour for feeding the baby. Establishing a regular hour for feeding the baby gives the mother more time for recreation, gives her opportunity to think of something else besides the baby. Send the mother out to a moving picture show, get her away from the child, and this will add materially to the reduction of the colic.

You should also go into the history of the mother's feeding. Only last week I saw a child with eczema, due to rice and eggs eaten by the mother. She was eating three raw eggs and four cooked ones a day to increase her milk. We cut out the rice and eggs and the baby got better. Go into the medicine the mother is taking. I have seen two cases of rash in a child due to the mother taking bromides. There are other drugs that affect children and it is important to go into the history of the mother—see what she is eating and what she is taking in the way of medicine.

DR. R. M. POLLITZER (Charleston):

I do not think you should say when a baby is a difficult feeder that the food is wrong; frequently it is the baby that is wrong. We stick too much to our label. Some of our feeding cases may have tonsillitis. They will now and then have pyelitis, and that makes them vomit. Malaria also occurs in the first year. And if a baby does not respond, do not forget the possibility of tuberculosis or of syphilis. Some children have a poor tolerance, and the doctor goes wrong in trying to make it gain rapidly instead of allowing it to stand still awhile and getting its tolerance established.

DR. E. A. HINES (Seneca):

Doctor Glover was kind enough to ask me to discuss his paper, and I shall be glad to comply. I shall only touch one or two points. I shall not discuss the feeding

proposition he has brought out, other than to say that when I received his request I wrote to the best pediatric clinicians in this country to find out whether the Doctor was advising you as he should—and I find Doctor Glover is advising you in accordance with the opinion of these great clinicians.

A good part of the Doctor's paper is taken up with modern journalism, and as I am your representative on the editorial board of our State Medical Journal, I will speak of that. No advertisement of an infant food goes into any State Journal in America until it has been passed upon by the advertising board of the American Journal of the Diseases of Children. There are some objections to commercialized infant foods—a few—but everyone of these is submitted to the ablest pediatricians in America. None of the advertisements get in until they are submitted to these men. Nobody claims that these foods shall take the place of cow's milk absolutely, and certainly not at all of breast milk.

The Doctor referred to the journals of Great Britain and the Continent. Some of these journals come into my office, and he is right about it. So I believe nowhere in the civilized world is there the same progress in the medical press as in the press of the American profession. More than that, the state Board of Health of South Carolina sees to it that the Pure Food and Drug Laws of South Carolina, especially the Food Laws in so far as they affect infants, are complied with.

DR. W. P. CORNELL (Columbia):

An important thing is to tell a mother that every bottle baby is a potentially sick baby. The financial saving is another point that will appeal to some mothers.

The doctor often puts a baby on cereal gruel and egg water, the baby improves, and the mother does not call the doctor again but keeps the baby on this diet. The baby gets into a state of starvation, and it is hard for the doctor to save it. When you put babies on these two things be sure to

go back in a day or two and get it back to decent food.

As to the Bulgarian bacillus, raw cow's milk has power to absorb hydrochloric acid in large quantities. We acidify that milk with Bulgarian bacillus, and therefore only a part of the hydrochloric acid is taken into it, leaving free hydrochloric acid for the stimulation of the other digestive functions. It is a fine food for that reason.

Doctor Pollitzer said an important thing when he stressed the importance of examining the baby. Many cases are not due to food, but to some other condition in the baby—tonsils, adenoids, ears, or some other

condition which by careful examination of the baby you will find.

I do not agree with Doctor Glover in hold-off vegetables until the second year. A great deal of nutritional disturbance in children today is due to improper salt balance, and these salts you get from vegetables. You are not giving them much food, you are giving them salts, which are very essential to proper metabolism. The protein needs of the child must be taken care of. Protein gives us our tissue building elements, and the only source of protein the child has is milk—either mother's milk or cow's milk.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

IDIOPATHIC NEPHRALGIA

Geraghty and Frontz describe in the June 1923 number of the Southern Medical Journal a renal condition which they have termed idiopathic nephralgia: it is not uncommonly found and is usually greatly benefitted by a simple operative procedure.

The cases of nephralgia which are reported in the literature, in which more or less severe pain is complained of in one or both kidney regions and for which no definite cause can be found, have invariably shown either upon clinical examination or at operation some pathological condition of the renal parenchyma, pelvis or perirenal tissues. Sometimes the only lesions found would be in the fatty capsule in the nature of a perinephritis.

The condition which they have designated as idiopathic nephralgia is "characterized by frequent and intense pain in the kidney in which by all modern diagnostic methods, nothing abnormal could be found either on clinical examination or surgical exploration." They describe the symptomatology as follows: "The invariable and predomi-

nating symptom of this group of cases is pain located for the most part in the region of the kidney involved. The pain is usually dull and aching in character and is referred either to the corresponding lumbar region or upper abdomen. It rarely radiates along the course of the ureter or into the testicle and in this respect differs from the characteristic symptom of an obstructing calculus of the pelvis or ureter. The discomfort may be constant or paroxysmal, the attacks of pain being often induced by sudden jars, lifting, etc. During the attack relief is sometimes afforded by the application of pressure to the renal region and many patients experience great comfort from lying on the affected side. There is sometimes a recurrence of the pain when the position is shifted to the opposite side." The severity of pain in idiopathic nephralgia is usually not as great as that caused from an obstructing stone. However, the writers had one exception to this in the case of a nurse, aged 38, who frequently had very intense pain, which at times could not be relieved by large doses of morphia. Operation gave

prompt and complete relief in this case.

The operation for idiopathic nephralgia is very simple. It consists in freeing the kidney and upper ureter and replacing the kidney in its former position. The essayists have had 18 cases during the past ten years. They performed 11 such operations; 8 patients obtained complete and permanent relief from symptoms.

According to the writers, "The diagnosis of idiopathic nephralgia is made with reasonable certainty by the employment of the various methods used today in urological diagnosis. It is arrived at by a process

of elimination whereby the existence of all other possible factors, such as stone, hydronephrosis, ureteral stricture, infection, neoplasm, etc., can be ruled out with certainty."

This important contribution of Geraghty and Frontz enables the profession to well handle an appreciable number of cases which have heretofore been handled in an unsatisfactory manner. Sufferers from renal pain always feel most grateful for relief, and they are usually willing to submit to operation if they are assured that it is necessary and if the physician does not give morphia adlibitum.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

THE MOTOR MECHANISM OF THE GALL BLADDER

Winkelstein, of New York City, writing in the *Journal of the American Medical Association*, June 16, 1923, states that the motor mechanism of the gall bladder lies in the respiratory system.

He claims to have proven this by a number of physiological experiments.

Indigo-carmin injected subcutaneously entirely disappears from the bile within eight to fifteen hours, through a complete gall bladder fistula in the dog, e. g. when the common duct is entirely ligated.

In the non operated dog, however, indigo carmine bile remained in gall bladder from four to five days, but did eventually entirely disappear (in about two weeks). This definitely proves that the motor activities are indeed very slight and largely displaces the common thought that following the ingestion of a meal, the gall bladder automatically contracts and relaxes, thus

pushing its contents through the duct into the duodenum.

That no such appreciable contraction does occur is shown in the following experiment. Four very small, flat, light disks of silver were served in quadrilateral arrangement on the serosa of the fundus of the gall bladder in a dog.

After the operative wound had entirely healed the animal was studied roentgenologically. Neither the fasting state, ingestion of food, magnesium sulphate solution, introduced into the duodenum after the technique of Lyon, hydrochloric acid, sodium chloride nor peptone, revealed any approximating motion of the metal disks. No contractile motion was seen, nor was there a diminution in the size of the gall bladder, which would have occurred had there been any decided emptying process.

This most interesting experiment however did show a definite cranio-caudal approximation of the disks with each inspiration, and from this it was thought that the

varying intra-abdominal pressure during respiration did influence its volume.

Furthermore, Winkelstein, apparently, proved this supposition by fastening small rubber balloons into the site of the gall bladder, and connecting same through the closed abdominal wall to a water manometer. A m. m. pressure of 80 to 100 was registered at the end of inspiration, and zero at the end of expiration. With the ampulla of Vater relaxed 15 to 20 m. m.

pressure was sufficient to extrude bile, but with the ampulla closed a pressure of 110 to 120 m. m. was needed.

It seems apparent therefore that the pressure exerted at the height of each normal inspiration when the ampulla is open suffices to express into the duodenum a tiny amount of gall bladder bile and from this he deducts that within the respiratory cycle lies the motor mechanism of the gall bladder.

DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

THE VALUE OF THE TOXIN (ANTI-GEN) OF RHUS TOXICODENDRON AND RHUS VENENATA. IN THE TREATMENT & DESENSITIZATION OF PATIENTS WITH DERMATITIS VENENATA.

DR. ALBERT STRICKLER,
Philadelphia, Pa.

In the journal of the A. M. A. September 17th, 1921 Dr. Strickler published his early results on the treatment of Dermatitis Venenata due to poison ivy and poison oak; and the desensitization of patients susceptible to poison ivy and poison oak. Again in the issue of June 2nd., 1923 of the Journal of the A. M. A. he publishes another article on the same subject with ample statistics to prove the value of this method of treatment.

At this time of the year in South Carolina every Doctor comes in contact with patients suffering from this disease. Our best methods of treatment are very unsatisfactory and at best can only relieve the irritating symptoms. It is not believed that any form of local treatment so far employed can shorten or abort a real attack of Dermatitis Venenata due to either of

the above poisons. In the majority of instances it is believed that the local treatment prolongs the attack by its irritant effect on the skin. Dr. Strickler has prepared the active principles of these plants which are capable of producing a Dermatitis Venenata. The treatment consists in the intramuscular injection of a solution of this specific antigen. A series of three to five injections are given, the dose varies from 0.3 to 0.7 c. c. The first two doses are given at twenty-four hours intervals, the remainder at intervals of from forty-eight to seventy-two hours. It is stated that the itching stops and the inflammation begins to subside within twenty-four hours, and that the skin is restored to normal in from four to five days. Reports on 356 cases are shown; 2.8 per cent were not benefited; 2.5 per cent doubtful; the rest were cured. Such results prove beyond doubt the value of this form of treatment.

In desensitization of susceptible patients the same dosage is used three to four days apart and in addition five to ten drops of the tincture of Rhus Toxicodendron is given by mouth three times daily for three to four weeks. In a personal communication from Dr. Strickler I found that the

preparation of this antigen was rather difficult to prepare and that it had to be ordered from a chemical house in Philadelphia. It is believed that this method is by far the best form of treat-

ment and should be tried out not only in cases suffering with Dermatitis Venenata but also in the individual who is susceptible to these poisons.

PEDIATRICS

WM. P. CORNELL, M. D., Columbia, S. C.

OBJECTS OF THE S. C. PEDIATRIC SOCIETY

When asked recently whether a good definition of Pediatrics wouldn't be "General Practice with an age limit" I answered "In a general way, yes." Upon thinking it over and looking back over ten years of Pediatrics preceded by fifteen years of general practice I would qualify the above reply as follows. The main difference consists in the more detailed and thorough examination of an infant by the pediatricist than the general practitioner makes, and the use, by the pediatricist, of special diagnostic instruments through which he gains confidence in himself and loses that helpless feeling which many general practitioners confess to when confronted with a tiny infant.

The few special instruments are: the small and portable electric outfit for examination of the ear drums, nose and throat; the small stethoscope chest piece; the tape measure; the balanced scale, and last but by no means least, the microscope for stool, blood and urine examinations.

To give one concrete example: Given a case of continued illness in an infant with fever of a daily remittent type. The average, busy general practitioner would, I think, ask some questions and then prescribe symptomatically, giving an initial purge followed by coal-tars and quinine. This is what I guess I did years ago. The

pediatricist today will realize that the disease causing the fever must be accurately diagnosed before instituting treatment, and that the last thing indicated will be coal-tars.

Realizing that the five commonest causes for obscure fever in a baby are: coryza, otitis media, pyelitis, lobar pneumonia and malaria, he will examine the throat and ear drums; the urine for pus; the chest, especially in the apices of the axillae, for pneumonia; the blood smear for a leucopenia and malaria, or for a leucocytosis and differential white count and, if an eosinophilia presents, the stool for ova.

For any other condition than malaria quinine could do no good, and if coryza was present the quinine, through its middle ear congestion, would invite infection and do harm. If pneumonia presented the coal-tars, through cardiac depression, would work harm. If a pyelitis, both quinine and coal-tars would do harm by delay, and the withholding of proper treatment. If an acute otitis media prompt surgical drainage only might prevent mastoid involvement. The correct and early diagnosis is the all important thing, and I meet with very few general practitioners who go equipped to make these special to them, but routine to the pediatrician, examinations.

The pediatrician, by carefully examining every infant he is called to, soon loses all feeling of strangeness and acquires, by

reason of a good percentage of correct diagnoses, confidence in his ability and a real pleasure in his contact with babies.

The nutritional disorders present to the pediatrician an entirely different picture from what the general practitioner usually sees. His constant taking of early feeding histories in later childhood disorders impresses upon him the necessity for correct food dosage in infancy, especially as to the need of a balanced diet after weaning. He understands and dreads the late effects, which may last all through adult life, of the consequences resultant upon faulty feeding during the first two years.

The aim and desire of the Pediatric Society, and of the course in Pediatrics given at the Southern Pediatric Seminar at Saluda, N. C., is to emphasize these points to the general practitioner, and to all doctors who, amongst their other duties, assume the responsibilities of attending children, so that they may see our view point and realize the necessity for a correct diagnosis at the onset of an illness in a baby, and learn how easily the technique of a complete examination may be learned, so that they can help us realize our slogan "Better babies in the South."

SOCIETY REPORTS

The Medical Society of South Carolina, Charleston County, has had an active six months since its annual meeting in December 1922. We have had so far meetings on December 26th, January 9th, January 23rd, February 13th, February 27th, March 13th, March 27th, April 10th, April 24th, May 8th, May 22nd, and are scheduled for meetings June 12th and 26th. After that there will be no more regular meetings until October.

The attendance of members has been as follows:

Dec. 26, 1922	25
Jan. 9, 1923	40
Jan. 23, "	26
Feb. 13, "	44
Feb. 27, "	39
Mar. 13, "	28
Mar. 27, "	39
Apr. 10, "	37
Apr. 24, "	37
May 8, "	47
May 22, "	29

Besides these there have been at various times a number of visitors.

During that time the following members have been admitted:

Dr. B. C. Crowell—transferred from the Manila P. I. Med. Sec.

Dr. D. W. Green—transferred from Sumter County Society.

Dr. T. D. Dotterer of Charleston, S. C. Elected.

Dr. T. R. Price of Charleston, S. C. Elected.

Dr. R. R. Prentiss of Charleston, S. C. Elected.

We have transferred to other societies:

Dr. D. W. Green to Sumter County.

Dr. J. P. Richardson.

One of our members is at present with the Navy in the Phillipines, one on duty with the U. S. P. H. Service in San Francisco, and one in Rochester Minn. studying. One member Dr. H. Mustard, has resigned to take up work with the U. S. Public Health Service.

Our Scientific program has been as follows:

DEC. 26TH, 1923.

Medical Case Report, Dr. W. A. Smith—
Abscess Lung.

Surgical Case Report, Dr. R. L. McCrady—Blood Transfusion in Secondary Anemia, preceding hysterectomy.

Demonstration of Specimen of Abscess of Lung—Dr. B. C. Crowell.

Paper by Dr. J. E. Smith, Bronchoscopic Oxygen Insufflation.

JAN. 9TH.

Owing to the volume of business transacted on motion all scientific papers and discussions were postponed.

JAN. 23RD.

Medical Case Report, Dr. Jagar appointed to make report absent.

Surgical Case Report, Dr. L. A. McGuire reported a stab wound of chest with unusual symptoms, operation and recovery.

Papers: Dr. A. R. Taft gave an interesting lecture on X-Ray examinations of the heart with pictures and demonstration of methods of measurements and calculations.

Dr. G. F. Wilson read a paper on breech extraction.

FEB. 13TH.

No medical or surgical reports as this was joint meeting between medical and dental societies to consider focal infection. The following subjects were considered:

Medical Aspect of Focal Infection—Dr. Robt. Wilson, Jr.

Surgical Aspect of Focal Infection—Dr. C. P. Aimar.

Dental Aspect of Focal Infection—Dr. E. G. Smith, D. D. S.

Eye, Ears, Nose and Throat—Dr. J. T. Townsend.

Urological Aspect—Dr. J. J. Ravenel.

Bacteriological Aspect—Dr. G. McF. Mood.

This meeting was an especially valuable one and the discussions were free. The papers were all good.

FEB. 27TH.

Medical case report, Dr. J. A. Ball—
Absent.

Surgical case report, Dr. J. S. Rhame, Gunshot Wound of Abdomen Perforating Liver. Operation, recovery.

Paper: Dr. L. Banov on Municipal Sanitation With Especial Reference to Charleston. A very complete paper.

MAR. 13TH.

Medical case report, Dr. J. A. Finger—
Absent.

Surgical case report, Dr. H. W. DeSaussure from the gynological side of hospital service.

Case reports by Dr. W. H. Johnson & Dr. A. R. Taft on the following:

(1) Comminutions of the Femur.

(2) Central Dislocation of Hip.

Paper by Dr. H. H. Plowden on "A Summary of a Series of 200 Breast Examinations." Considering the last 200 breast specimens sent to the pathological laboratory.

MAR. 27TH.

Medical case report, Dr. Edward Rutledge reported a case of gall stones with unusual symptoms.

Surgical case report: Dr. W. H. Johnson, the treatment of burns.

Essayist: Dr. O. B. Chamberlain—
Absent.

APR. 10TH.

Medical case report, Dr. J. J. LaRoche—
Absent.

Surgical case report, Dr. T. E. Bowers reported a case of toxemia of pregnancy with severe anemia, treated by blood transfusion followed by forced delivery. Slow recovery.

Paper, by Dr. W. C. O'Driscoll on the Anatomy of Internal Hydrocephalus.

A well delivered and illustrated lecture.

APR. 24TH.

Medical case report by Dr. C. W. Kollock, toxin neuritis (optic) probably secondary to Sinus infection.

Papers: Dr. J. A. Finger—Subject unannounced—Absent.

Dr. O. B. Chamberlain read a most interesting and instructive paper on the "Analysis of Psychiatric Cases in the Roper Hospital for 1921-1922."

MAY 8TH.

Medical case report by Dr. O. B. Chamberlain—a case of a symptom complex resembling Paralysis Agitans and following Lethargic Encephalitis.

Surgical case report by Dr. E. C. Baynard—reported a case of Pyelo Nephritis with unusually severe course and symptoms. Marked improvement under cystoscopic drainage.

Dr. A. R. Taft reported a case of Papiloma of Stomach with malignant degeneration, showing X-Ray plates.

Papers on Endocrine functions were then read.

Dr. J. H. Cannon considered the medical aspect.

Dr. W. H. Zeigler D. Phar., Endocrine therapy.

Dr. J. Van de Erve who was to consider the Physiological aspect was absent.

MAY 22ND.

Medical case report by Dr. M. W. Beach who reported a case of tetanus in a child in which recovery followed doses of tetanus antitoxin in all 67,000 units were given.

Surgical case report by Dr. J. F. Townsend who considered a number of common eye and ear conditions at the Roper Hospital.

Papers on Tropical Diseases were presented by Dr. F. B. Johnson and B. C. Crowell. The former giving a number of statistics and the latter an excellent paper

well illustrated with Photographs taken from his extensive observations.

The program for the June meetings follows:

JUNE 12TH.

Medical case report by Dr. Robt. Wilson.

Surgical case report by Dr. C. P. Aimar.

Paper by Dr. G. F. Wilson, Subject Eclampsia. Discussion by Dr. Robt.

McCrady, L. A. Wilson, H. K. Jenkins and J. B. Johnosn.

JUNE 24TH.

Medical case report by Dr. R. M. Politzer.

Surgical case report by Dr. J. E. Smith.

Paper by Dr. W. M. Rhett, Subject Tetany.

In April we had the pleasure of having the State Association meeting and tried to make it a success so far as we could. The meetings and the clinics were well attended. Later the Southern Railway Surgeons met here also. The Medical College of the State of South Carolina ended its 94th session here this week. Its exercises were well attended.

Owing to the fact that this society has the responsibility of conducting the Roper Hospital and are trustees for the various funds left at various times for this charity, many of our meetings are occupied to a considerable extent with affairs of the hospital. These have from time to time caused us to modify our procedure. But these various changes would be of little or no interest to the readers of the Journal so I will not summarize such as has occurred during the past six months.

J. C. Sosnowski,
Secretary.

BOOK REVIEWS

THE INFANT AND YOUNG CHILD. Its care and feeding from birth until school age. A manual for Mothers. By John Lovett Morse, M. D., Edwin T. Wymann, M. D. and Louis Webb Hill, M. D., of Harvard Medical School and Children's Hospital, Boston. 12 mo. of 271 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, 1.75 net.

TEXT-BOOK OF THERAPEUTICS including the Essentials of Pharmacology and Materia Medica. By A. A. Stevens, M. D., Professor of Applied Therapeutics, University of Pennsylvania, Philadelphia. Sixth edition, entirely reset. Octavo of 793 pages. Philadelphia and London: W. B. Saunders Company, 1923. Cloth \$6.25 net.

THE MEDICAL CLINICS OF NORTH AMERICA (Issued serially, one number every other month). Volume VI Number VI May, 1923). By San Francisco Internists. Octavo of 296 pages with 66 illustrations and Complete Index to Volume VI. Per clinic year (July 1923 to May 1924). Paper \$12.00 net; Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

LEGAL MEDICINE AND TOXICOLOGY. By Peterson, Haines and Webster. While this is technically a new edition—the second—it is virtually a new work, because it has been rewritten, reset and much enlarged.

It is the only comprehensive work on these subjects published in many years. Its editors and corps of expert contributors are the pick of the world. Nowhere could greater authorities be found.

A very important feature of the work is the clinical angle from which much of the material is presented. This is particularly so in the section on toxicology, where are given symptomatology, diagnosis and treatment of many of the conditions there discussed.

It is not alone the expert upon whom the law may call for testimony but every practitioner is liable to be called at any

time as a witness, or to defend himself in suits for malpractice.

Peterson, Haines and Webster's Legal Medicine and Toxicology will guide him in his testimony and will show him how to avoid pitfalls set by the opposing legal authorities. Published by: W. B. Saunders Company.

THE MEDICAL CLINICS OF NORTH AMERICA. (Issued Serially, one number every other month). Volume VII Number 5 March, 1923. By Ann Arbor Internists. Octavo of 273 pages and 22 illustrations. Per clinic year (July 1922 to May 1923). Paper \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month). Volume III Number I (Philadelphia Number, February, 1923) 300 pages with 105 illustrations. Per Clinic year (February 1923 to December 1923). Paper \$12.00 net; Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

THE MEDICAL CLINICS OF NORTH AMERICA. Contributions by, Dr. Albion W. Hewlett, Standard University Medical School. Dr. Marshall C. Cheney, University of California Hospital. Dr. Langley Porter, Department of Pediatrics, University of California Medical School. Published Bi-Monthly by W. B. Saunders Company. Philadelphia and London.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month). Volume II Number VI (St. Louis Number December 1922) 248 pages with 105 illustrations and complete Index to Volume II. Per clinic year (February 1922 to December 1922). Paper \$12.00 net; Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially one number every other month). Volume III. Number 2, (New York Number, April 1923). 286 pages with 159 illustrations. Per Clinic year (February 1923 to December

1923). Paper \$12.00 net; Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

EXERCISE IN EDUCATION AND MEDICINE. By R. Tait McKenzie, M. D., LL. D., Professor of Physical Education and Physical Therapy and Director of the Department of Physical Education, University of Pennsylvania. Octavo of 601 pages, with 445 illustrations. Philadelphia and London: W. B. Saunders Company 1922, Cloth, \$5.00 net.

THE SUCCESSFUL PHYSICIAN. By VERLIN C. THOMAS, M. D. Visiting Physician to Franklin Hospital, San Francisco, Octavo of 303 pages. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$4.00.

CLINICS AND COLLECTED PAPERS OF ST. ELIZABETH'S HOSPITAL RICHMOND, VA. Volume of 1922. Published by C. V. Mosby Company, St. Louis. Price \$7.50.

The work of St. Elizabeth's Hospital is recognized all over the country. Dr. J. Shelton Horsley, surgeon in chief, has contributed largely to the scientific literature especially along the lines of surgical research. We commend the volume as presenting a resume of much that is representative of the best that is in medicine and surgery of the South.

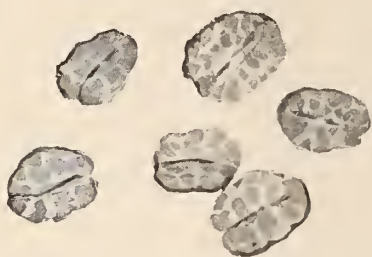
NURSERY GUIDE FOR MOTHERS AND NURSES. By Louis W. Sauer, M. D. Published by C. V. Mosby Company 1923. Price \$1.75.

NUTRITION OF MOTHER AND CHILD. By C. Ulysses Moore, M. D., M. So. (Ped.) Including menus and receipts by Myrtle Josephine Ferguson, B. S., B. S. in H. Ec., with 33 Illustrations. Published by J. B. Lippincott Company, Philadelphia. Price \$2.00.

INTERNATIONAL CLINICS VOL II. Series Thirty Third 1923. A quarterly of clinical lectures and especially prepared original articles on Treatment, Surgery, Gynaecology, Obstetrics, Pathology, Hygiene and many other topics of interest to students and practitioners by leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A. M., M. D. Philadelphia, Pa. Published by J. B. Lippincott Company, Philadelphia, Pa.

APPLIED PSYCHOLOGY FOR NURSES. An Introduction to by Donald A. Laird, Assistant Professor of Psychology, University of Wyoming. 1st Edition. Size 8vo. 49 Illustrations. Pages 236. Price \$2.50. Published by J. B. Lippincott Company, Philadelphia, Pa.

VENEREAL DISEASES IN THE EXPEDITIONARY FORCES. By George Walker, M. D. Published by Medical Standards Book Co., Baltimore. The author of this splendid book is a South Carolinian, and the profession will read Dr. Walker's scientific treatise with the keenest interest. The author delivered an admirable address on Prophylaxis of Venereal Diseases before the South Carolina Medical Association a few years ago. This whole subject is discussed here in a most convincing way.



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The Journal OF THE South Carolina Medical Association

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GREENVILLE, S. C., AUGUST, 1923

NO. 8

CONTENTS

EDITORIAL DEPARTMENT:

Several Interesting Papers in This Issue	555
Fourth District Meets in Greenville	555

ORIGINAL ARTICLES:

Common Eye Conditions Met With in General Practice by Pinkney V. Mikell, M. D., Columbia, S. C.	556
The Treatment of Toxemia of Pregnancy With Convul- sions by Thos. Pennal, M. D., Belton, S. C.	558
Diagnosis and Treatment of Nasal Sinus Disease With Case Reports by William McWhorter, M. D., Anderson, S. C.	560

(Contents continued on page ii.)

The Baker Sanatorium

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Notes on Some Tropical Diseases by Bowman Corning Crowell, M. D., Charleston, S. C.	564
A Brief Series of Uterine Suspension Cases With Follow Up Results by John R. Boling, Columbia, S. C.	567
SURGERY DEPARTMENT:	569
UROLOGY DEPARTMENT:	571
SOCIETY REPORTS:	572
MINUTES:	574
ABSTRACTS	577

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OF THE

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EDITORIAL

SEVERAL INTERESTING PAPERS IN THIS ISSUE

The Journal pursues the even tenor of its way notwithstanding the heated term and thoughts of vacation in the minds of many office workers. The vast majority of the doctors of South Carolina rarely take vacations and they always want good reading matter when they have the time to read at all.

Dr. Crowell's article is of a broad interest to the Southern profession and is a distinct contribution to the scientific articles published in the Journal this year. Since the reading of this paper Dr. Crowell has been called to the professorship of Pathology in the Jefferson Medical School.

All of the papers in this issue are of great practical value to the physicians on the firing line.

FOURTH DISTRICT MEETS IN GREENVILLE

The Fourth District Medical Society will meet in Greenville Sept. 18th. Dr. L. Rosa H. Gantt of Spartanburg is the very efficient Secretary of this organization, and has sent out requests for titles of papers to be read. The Fourth District was the first to be organized in the state and has always been highly successful, rivaling the meeting of the state association itself in point of attendance and variety of interesting papers.

ORIGINAL ARTICLES

COMMON EYE CONDITIONS MET WITH IN GENERAL PRACTICE

By Pinkney V. Mikell, M. D., Columbia, S. C.

It was once said by an eminent man "There is no vice like advice" and I trust that what I may say will be taken more in the way of practical suggestions. The Good Book says "Come let us reason together" and I trust that that will be our attitude today.

There is one thing above all else that I would call to your most serious attention and it is the conservation of the eye sight of our school children. When I tell you that one out of every seventh school child is suffering with an error of refraction, which could and should be corrected with glasses and otherwise, no doubt you will be appalled. I plead with you men, the family physicians, to insist upon a Snellen's test chart being placed in every school room in South Carolina and the visual acuity test, which is not difficult, be done by the teacher or what is better still, by the physicians of the State. A child should not be admitted to school without this test being made and the errors corrected, any more than he should be admitted without vaccination against Smallpox. These corrections of refractions can be made only under mydriasis with atropine.

SQUINTS IN CHILDREN

Again the family physician sees these cases early. I assure you that cross eyes can be corrected with glasses and treated without operation only when refracted under atropine and before six years of age. If allowed to go any later, the non-fixing eye will become amblyopic from non-use

and muscle operation will have to be done for cosmetic reasons. You, the practitioners, are the guardians of these little ones and the responsibility is upon you.

Illustrative case: Mrs. W. R. P., Denmark, S. C. Age 25. Right eye turned in since little girl. Vision, Right, counts fingers only; left 20/15. Fundus O. K. Right eye turns in to such an extent that fusion is lost and is amblyopic from disuse. A tenotomy upon internal rectus and advancement of external for cosmetic reasons will have to be done.

FOREIGN BODIES IN EYE

Foreign bodies may be hurled with such force as to tear the eyeball and spill the contents or it may be a very simple thing. One of the commonest forms of foreign body injures to the eye is the explosion of soft drink bottle and flying glass wounding the vital parts of eye, which may necessitate enucleation. The foreign body may be an eye-lash, a grain of sand, cinder under lids, lime in eyes, etc., emory particles, or flying pieces of metal. These latter usually seem to have a predilection for the cornea and become imbedded. In treating foreign bodies in the eye, more poor work is done by not looking carefully and in not having proper illumination, than for any other reasons.

To remove a foreign body, first anesthetize the eye by a drop of 4 per cent solution cocain or 2 per cent butyn. Focus a strong light upon the eye, evert upper and lower lids and search for foreign body with loupe. If found loose under lid remove same with wet cotton applicator; if imbedded in cornea, it is best removed with a spud, or if metal by the magnet. Atropin is not always necessary. Argyrol and cleanliness afterwards.

Illustrative cases: Mr. D. age 25, Jan. 29, 1920. "Workman in brushing off machinery in cotton mill, piece of metal struck patient in left eye." I saw him Feb. 4, 1920, and found two ulcers. Used atropin, boric acid drops and eye patch. He was back at work in two weeks. Eighteen months later, he made claim on mill that he could not see out of left eye. I found two small scars on cornea to side of pupil. Fundus O. K. Right eye 20/15; left 20/15. Caught patient malingering and court threw case out.

James S., Laborer, age 35, Sept. 28, 1922. Injured while helping to install electric fire pump. In connecting water main to pump, he poured a ladle of boiling lead into joint not knowing it contained water, which generated steam immediately, splashing literally a lead bath in both eyes, the lead forming a complete ring around both cornea, partially imbedding itself in sclerae and singeing away all of his eyelashes. Fortunately for this fellow, they filled both eyes with carron oil at once. He was at my office a few minutes later. I cocaineized both eyes and removed all lead, filled the eyes with atropin ointment, banded and redressed twice daily. I have never seen as much foreign material in a human being's eyes. He was off from work four weeks and strange to say, his vision was perfect in left eye and 20/50 in right eye at time of discharge.

In this connection, the time is at hand in which all who employ expert workmen should require two things; namely, visual acuity tests at regular intervals, with proper correction, and require those who work around machinery to wear protective goggles. It is surprising at the number of these workmen who have unprotected eyes and defective vision, which so often is responsible for the accident.

Read before 8th District Medical Association, June 21, 1922. Revised and read before Second District Medical Association, Jan. 10, 1923.

FIRST AID TO REDDENED EYES

The general practitioner is nearly always the one who sees the acute reddened eye, and it is in his hands what the patient's future welfare will be; whether he will see or will be blinded. Much of the blindness today is due to unrecognized glaucoma. I can best illustrate this by two case reports:

Mr. W. age 65, had a severe pain in right eye for several weeks. The pain was accompanied by nausea. When I first examined him he had typical symptoms of glaucoma—severe pain in eye radiating to temple, moderately dilated pupil, ground glass cornea and tension in right eye very much increased. Tonometer reading 60. In this case the ophthalmoscope revealed optic atrophy and marked cupping of the nerve. Atropin in these cases is absolutely contra-indicated. To my great sorrow I have seen cases treated with atropin. Much of the blindness today is due to unrecognized glaucoma, and as I have said, the diagnosis is first in the hands of the practitioner.

An unusual but extremely interesting case: Dr. C., dentist, (no venereal history) in extracting a bad molar from a colored patient, broke the tooth which flew up with great force and struck him in the eye at the corneoscleral junction. His physician treated him with argyrol but the eye became more painful and eighteen days after injury I saw the patient. The eye was very red, *no vision*, could not count fingers, iris dull and pin pointed, and there was a leathery appearance of a section of the iris about one-fourth inch in width where injury had been at corneoscleral junction to pupil. Atropin in even 3 per cent solution had no effect on pupil. I sent him on the twentieth day to have a Wassermann test made which was negative. On the twenty-second day the test was one plus and on the twenty-fourth day two plus, an increasing reaction (This in my opinion was point of entry for his syphilitic general infection as well as his iritis). Salvar-

san administered and in twenty-four hours after first salvarsan injection the atropin started to dilate pupil. After four weeks of specific treatment, his eye was to all appearances normal and with normal vision.

These two diseases, glaucoma and iritis, may be mistaken for each other and at times it is not easy to differentiate. Glaucoma usually occurs after forty, but most often between fifty and sixty, generally comes on suddenly and severely at night, pain, severe and cutting, radiating to temple. Vision is usually diminished. Cornea has glazed appearance, pupil usually moderately dilated, sluggish and often inactive. Prodromal symptoms: Colored halos around lights appear and foggiess of vision, patient wants increasingly stronger glasses. Palpation of eye-ball over upper lids with patient looking strongly downward will reveal marked increase in tension in eye. Both iritis and glaucoma are probably due to focal infection of some kind, and often syphilis.

In conclusion my fellow practitioners, may I remind you of what the Good Book says: "No man liveth unto himself". That applies to medicine more so than in any vocation that I know of. In our mutual problems there should be the closest relationship between the practitioner, and the practitioner who limits his field of endeavor. The one message on my heart today above everything else my friends is: Let us conserve the precious gift of vision. The most appealing speech I ever heard was made in behalf of the mountain child; their silent plea being "Help we uns." The mountain child is not the only child that is crying out for help. The boys and girls all around us in our native State, in their physical and mental backwardness are silently crying out to us for correction of their physical defects. So I say again in conclusion: Let's "Help we uns" and make "Conservation of Vision" one of the high objects of our professional activities.

THE TREATMENT OF TOXEMIA OF PREGNANCY WITH CONVULSIONS

Thos. Pennel, M. D., Belton, S. C.

As is indicated by the title, I have limited myself in this paper to a consideration of those cases of Toxemia of Pregnancy which have had convulsions or which are imminently threatening to have convulsions. The line of treatment indicated is essentially the same as that carried out at the Sloane Hospital for Women, New York City, under the directions of Dr. Wm. E. Studdiford.

Before attempting to outline this treatment, let me say a word in passing about prophylaxis. This is of prime importance because by appropriate prophylactic treatment the incident of severe Toxemia can be greatly lessened. Throughout pregnancy urgent dentistry and dental hygiene should be insisted upon, with a view to removal of and prevention of foci of infection. Particular attention should be paid to the blood pressure findings in pregnant women. Often it is the earliest indication of Toxemia, even before urinary changes are manifest. Any sudden sustained increase in arterial tension in a patient whose blood pressure has been normal, or approximately so, is most suggestive of beginning Toxemia.

It is generally agreed, I think, that the treatment of severe Toxemia of Pregnancy with marked nervous symptoms (either convulsive or threatening to convulse) should be along three great lines:—

- (1) To quiet the nervous system
- (2) To promote elimination
- (3) To limit the ingestion of nitrogenous foodstuffs.

In the class of cases we are now considering the most prominent symptom and the one most urgently needing treatment is increased nervous irritability. The one drug of preeminent usefulness in the treatment of this symptom is morphine. Morphine should be given in large doses and repeated

Read before S. C. Medical Association, Charleston, S. C., April 19, 1923.

up to the physiological limit. Injected hypodermatically, 1-2 grain may be given as an initial dose, and then 1-4 grain every hour or two until the nervous irritability is allayed or until the patient's respiratory rate is down to 10 or 12 per minute.

A very useful adjunct to morphine, and one which has a particular advantage at the onset of the treatment is Paraldehyde. This drug administered intravenously in I. C. C. doses has a very marked but transitory sedative action. Given during a convulsion, its effect is dramatic; the patient will often stop convulsing immediately and drop off into a profound sleep. Paraldehyde may with advantage be given along with the morphine at the beginning of the treatment to keep the patient quiet while the morphine is taking effect. The action of Paraldehyde, given intravenously, is of short duration, about 20 to 30 minutes. It is a clinical observation that in most cases, almost coincident with the intravenous injection of Paraldehyde, the patient will give a dry irritative cough before dropping off to sleep. Paraldehyde may also be administered rectally in 1-2 oz. or 1 oz. doses throughout the treatment and is a valuable adjunct to Morphine.

The rectal administration of Chloral and Bromides is useful in keeping down nervous irritability, after this has first been brought under control by the stronger drugs, Morphine and Paraldehyde.

Elimination thru the gastro-intestinal tract, thru the kidneys and thru the skin should be encouraged.

Gastric lavage is useful. This should, of course, be attempted only after the patient has been quieted nervously. Then a lavage with a large amount of hot soda bicarbonate solution is apparently beneficial. Often it will be wise to introduce into the stomach 2 oz. of castor oil or 1 to 2 oz. Saturated Solution Magnesium Sulphate by the stomach tube after the lavage. Elimination from the large bowel may be promoted by frequent colonic irrigations best given hot and slowly.

The high, hot colonic irrigations may possibly play a role in promoting elimination from the kidneys. Where practicable, and unless the patient is water-logged with edema, a regime of forced fluids by mouth should be instituted.

Sweating induced by hot pack or an electric blanket, is useful in promoting elimination through the skin and in lessening the edema so often present.

The diet should be of low-protein, salt-free content. Reliance must at first be placed in fluids, usually without milk, as even the amount of protein contained in milk seems to be harmful to these patients.

Where the blood count of the patient offers no contraindication, phlebotomy is often efficacious in lowering a high blood pressure and in the treatment of the pulmonary edema which is sometimes seen in the very severe cases. Five hundred to eight hundred C. C. of blood are usually withdrawn. Obviously the blood pressure should be observed during the progress of the phlebotomy, as too marked a fall in pressure is a contra indication to further bleeding.

Cardiac stimulants may be needed, and the choice of stimulant will vary with different doctors. Perhaps some form of digitalis is as good as any. For emergency stimulation, particularly in the presence of pulmonary edema, strophanthin by vein has been found very useful.

The induction of labor is a much disputed question. Williams in his text book, advocates early induction of labor, whenever practical and under satisfactory surroundings. Personally I believe with Dr. Studdiford, that induction should be deferred (at least in the majority of cases) until the convulsive stage is controlled. In a series of 77 cases covering a period from February 1st to November 1st, 1923, the mortality was two patients.

Under the treatment as outlined, a large per cent of patients will have a spontaneous delivery.

As is the case in a small per cent of pa-

tients, symptoms may clear up and patients deliver normally, days, weeks or even months afterwards. Some cases, however, will demand induction of labor, and in this class of cases I think the method of induction a very important one.

In the group of cases with small deformed, or otherwise inadequate pelves, and those with tumor masses, etc., we have only one alternate, surgery.

The group of cases where the cervix is closed, rigid and the canal not obliterated (especially is this true in primipara) perhaps the safest method is the introduction under strict aseptic technique of a rubber bougie, after which the vagina is packed with iodoform gauze, this to remain in until labor is well established. This should be followed by the introduction of Voorhees Bag, which is left in until expelled by uterine contractions. A number four bag usually being used. After the expulsion of the Number Four bag, the cervix is dilated sufficiently to allow uterine contraction to expel the foetus, or forceps may be applied, and delivery accomplished under ether anesthesia. Chloroform should not be used in cases of Toxemia, because of the liver damage incident to the Toxemia.

In the multiparous woman, with a large soft easily dilated cervix, the Voorhees Bag is all that is needed to insure labor within a few hours.

CONCLUSIONS—(1) That morphine is the one drug to depend upon in the primary treatment, also that Paraldehyde is a valuable drug when used with morphine.

(2) That induction of labor should not be attempted early, (at least in the majority of cases.)

(3) Elimination thoroughly carried out and especially after the control of the convulsive stage.

DISCUSSION OF DR. THOMAS PENNEL'S PAPER

The percentage of patients having convulsions in an obstetrician's practice is a good index to the class of work that he is

doing. DeLee and Williams both state in their text books that occasionally Eclampsia may strike without warning symptoms. These statements are true, although this happens so seldom that I believe the lives of many mothers and babies would be saved if this responsibility was put upon the attendant.

This is an excellent and up-to-date paper. The morphine treatment has lowered our mortality at the Roper Hospital Clinic very much. I recall the old days when we did Cesarean section for eclampsia our mortality was then about 75 per cent. With the morphine treatment "modified" our mortality is about 15 per cent. By modifying the Morphine treatment I mean that labor is induced and terminated par via natural as soon as it is possible to do so without adding to the patient's shock.

Lester A. Wilson,
Charleston, S. C.

DIAGNOSIS AND TREATMENT OF NASAL SINUS DISEASE WITH CASE REPORTS

By William McWhorter, M. D., Anderson, S. C.

If some noted specialist from a distance came here to read a paper on this subject we would all probably sit up and take notice. Your humble servant on the contrary is neither noted nor from a distance, and for this reason wishes it understood in the beginning that he is not assuming the authority to tell you how to diagnose and treat nasal sinus disease. Even if the essayist were competent, the discussion of sinus disease in all its forms would be too lengthy for a paper such as this. So instead of attempting this, it is my intention, if you please, to simply report my experience with forty cases of acute and sub-acute empyema of the sinuses seen during the last three years. I beg, Gentlemen, that you accept it for what you think it is worth.

Practically the entire progress of knowledge in regard to the nasal accessory sin-

uses has taken place within the last thirty years.

As in all new fields of investigation the literature upon the subject and the methods of diagnosis and treatment have not been standardized. Some pioneers have probably been too radical and some too conservative in their methods of treatment. At the present time, however, there is more agreement and a tendency toward conservatism. External operations and those through the mouth are rarely done, intranasal methods being used almost entirely.

The diagnosis of sinus disease has not been made in the past as often as it should have been. It is very common and every case of acute or chronic rhinitis is accompanied by more or less sinusitis. Indeed, the state of the nasal mucous membrane is often but an expression of the condition existing within the sinuses. The sinusitis varies in severity from a simple catarrhal condition to a pronounced empyema. Many cases of so-called neuralgia, obscure headache, chronic eye affections and rheumatic conditions have their etiology in a chronic undiagnosed sinusitis.

Since the incidence of influenza in this country sinus disease has been much more common and as a rule more severe in form. The majority of cases of sinusitis appears to be either a complication or a sequence of so-called influenza. The forty cases reported in this paper were all secondary to this disease and were seen either during the attack or within a few weeks afterwards.

Of the *subjective symptoms*, pain was the most frequent complaint of these patients. In most cases the pain was more or less periodic, coming on in the morning and wearing off toward evening. In a few severe cases the pain was constant, the patient being unable to rest day or night. The pain was most often located in the region of the affected sinus, the supraorbital being the most common. In a few cases the pain radiated to other parts of the head.

About one half the cases showed moderate elevation of temperature. High fever is uncommon in sinus disease unless there is some complication.

Of the *objective symptoms*, two cases showed marked edema of the eyelids. Four cases showed marked injection of the conjunctiva. On intranasal inspection the majority of cases showed pus within the nasal cavity most often coming from under the middle turbinate bone. In some cases it was necessary to shrink the tissues and use suction to demonstrate pus. A very large majority of cases showed some form of nasal deformity such as deviated septa, hypertrophic turbinates or abnormally small nasal passages. The involved sinuses were most often on the same side as the septal deviation. These irregularities by interfering with normal nasal drainage predispose to sinus infection.

In none of these cases were the teeth found to be the cause of the infection. The teeth play a minor part in sinus disease never affecting any but the antrum and that only occasionally.

Most of the antrum cases showed tenderness on pressure over the canine fossa. Most ethmoid and frontal sinus cases showed supraorbital tenderness.

All cases were transilluminated. It was a valuable aid in the diagnosis of antrum disease. It was of little value with the frontal sinus and of course no value with the ethmoid and sphenoid cells. Pus or a thickened mucous membrane in the antrum will decrease the brilliancy of illumination on the affected side. One cannot depend upon transillumination alone, however.

X-Ray plates could not be obtained in all cases. Where made, however, the X-Ray findings as a rule corresponded with the clinical symptoms and signs and with what was found at operation. Authorities agree that the X-Ray plate where properly made and interpreted is a very valuable means of diagnosis although of secondary importance to the clinical signs and symptoms.

It is very dependable with the maxillary and frontal sinuses but less dependable with the ethmoid and sphenoid cells. In an acute sinusitis all the sinuses of one side or possibly of both sides are more or less involved. An empyema may be primary in one sinus and the infected pus may drain into the adjacent sinuses causing secondary infection. Of the forty cases reported, the main trouble appeared to be in the maxillary sinus in thirteen, in the frontal sinus and ethmoid cells in twenty-seven.

In regard to *treatment* it is impossible to outline any fixed rules. Every case is a law unto itself. Authorities agree that the problem is one of establishing free drainage and ventilation of the sinuses. They also agree that during an acute sinusitis the indication is for the minimum of operative work.

Where definite indications existed in the maxillary sinus the case was treated by intranasal puncture and normal saline irrigation. The inferior turbinate bone was retracted upwards and the trocar introduced close to the nasal floor. The opening was enlarged at initial puncture sufficiently to prevent rapid closure and in order that subsequent irrigations might be made easily and without pain to the patient. Irrigations were continued every forty-eight hours until the saline returned clear and symptoms were relieved.

The old method of treating antrum disease by extraction of a tooth and irrigating the antrum through the mouth is obsolete. It is uncleanly and unsurgical from the fact that antrum disease is nearly always secondary to some other nasal condition which must be relieved before the antrum can be cleared up. Suppurating frontal sinuses and ethmoid cells must be drained and nasal deformities corrected. It is only when the antrum disease is secondary to dental sepsis that the extraction of teeth is permissible.

The frontal sinus and ethmoid cases first were given medical treatment consisting of shrinking of the nasal mucous membrane

followed by removal of pus from the nasal cavity by suction and irrigation. Astringent and antiseptic applications were then applied to the nasal mucous membrane with the idea of relieving the nasal congestion and thus encouraging drainage from the sinuses. A large majority of acute sinus cases would be relieved at least temporarily by this form of treatment if it were begun in time. Many patients will not report for treatment in the early stages, however, so that when seen some form of operative treatment is necessary to give relief.

If the medical treatment did not give relief within a reasonable time the next step in the treatment of frontal sinus and ethmoid cases was to remove the anterior tip of the middle turbinate bone. The anterior end of this bone is often hypertrophic or may contain cells. Being thus wedged in between the septum and the external nasal wall it will often impede drainage from the frontals and ethmoids. The removal of this obstruction will often permit of free drainage. No more of any turbinate bone should be removed than is necessary, however.

If the removal of the anterior tip of middle turbinate bone did not provide sufficient drainage to give relief the next step in the frontal sinus cases was to enlarge the naso-frontal opening. In the ethmoid cases the next step was the opening of the anterior cells by Mosher's method. These last operations were not done except as a final resort. In my experience they were sometimes necessary in order to relieve the patient. Of the twenty-seven frontal-sinus-ethmoid cases ten were relieved by medical treatment, nine required removal of anterior portion of middle turbinate bone, ten required in addition either enlargement of naso-frontal passage or opening of ethmoid cells or both.

All cases recovered except two. One of these succumbed from a meningitis secondary to a frontal sinusitis. The other from a general sepsis secondary to a pansinusitis. Neither of these cases were op-

erated on and were not seen until fatal complications had developed.

DISCUSSION OF DR. McWHORTER'S PAPER

DR. C. L. KIBLER, (Columbia):

I do not entirely agree with the Doctor in regard to antrum infection and its treatment. I think he is right when he makes the statement that in the majority of these infections the ethmoid and frontal sinus is associated with the antrum. We will have five to one frontal sinus infectious following flu, five to one of antrum infections, and when we do have antrum infection it is not due to any bacteria like the pneumococcus, streptococcus or staphylococcus, or Friedlander's Bacillus. But due to direct infection from diseased teeth. I do not agree with our distinguished Killian who started this work thirty years ago, that antrum infection is due directly and primarily to infection through the nose. My experience is that ninety per cent. of these cases is due to abscessed teeth, and when the teeth are extracted and in addition you open the antrum intranasally, you will cure the patient. There is drainage downward, and drainage after all is the most important thing in any infection where you have to contend with pus. Furthermore, I would like to say that most of these cases are not empyema cases when you have infection of the mucosa, as the discharge is not altogether filled with pus. Where it is filled with pus of course the X-Ray will tell you. You can have many antrum infection. The diagnosis is reasonable and ethmoidal sinus infections where the X-Ray will tell you that there is no bly easy following flu. If you do not have a drain so the drain carries out a few ethmoid cells my idea is to go farther than that and use a rasp on the anterior part of the antrum and increase the size of the frontal nasal duct and establish good drainage. And in three or four days you have cured your case. In acute infections following flu if one uses adrenalin and cocaine for twenty-four to forty-eight hours, in many cases they will clear up without operative measures.

DR. J. L. SANDERS, (Greenville):

In the sinus cases that have been sent to me by the general practitioner the symptoms are manifested in various ways, but frequently they are chronic before we see them.

I remember a case of a boy nine years old who had been treated for two years for tuberculosis. He was brought in, and upon examination we found a mucocele in his antrum and some bronchiectasis. Proper treatment relieved the mucocele and the symptoms of tuberculosis cleared up.

Cases are frequently sent in with pyelitis, especially children, and upon examination we find an infected antrum. Treatment is instituted, and the symptoms clear up. I have had several such cases recently, where the patient had cold after cold. Upon examination of the sinuses and especially the antrum, we found it filled with inspissated pus. On opening the antrum, and in acute conditions using suction, the patient is relieved. In acute cases it has been the practice of most rhinologists to use adrenalin and cocaine, but we have found that the physiological affect of cocaine and adrenalin is to increase the congestion afterwards. We have used a 25 per cent. argyrol solution, fresh solution, every two or three days. The effect lasts for hours and gives ample time for the sinuses to drain.

In chronic conditions we formerly irrigated it with permanganate solution, but now we make a large opening and use suction. Continuous irrigation of the membranes tends to make them boggy and the condition is worse than in the beginning. But with suction you relieve the condition and the membranes return to normal.

DR. V. P. MIKELL, (Columbia):

It seems to me it is of importance to men in the general practice of medicine that in any trouble following acute catarrh, conditions like influenza, the case be immediately sent to the specialist. We find very often that a low grade fever and general debility comes from general sinus infection, and often when we use the nasal speculum we find pus in the nostrils, and by proper syringing or the use of suction, or argyrol or one of the new preparations in a vast majority of cases the trouble clears up.

I am glad the Doctor has brought out the matter of conservative treatment. I think there is entirely too much radical work done in the nasal sinuses, and often conditions made worse than before the work was begun. I think 95 per cent. of these cases can be cured by conservative treatment, which I will not go into today. But it seems to me that is a practical point—that those children

who suffer from chronic debility should be examined particularly for sinus infection.

DR. WILLIAM McWHORTER, (closing):

I agree with Doctor Kibler that they are not all frontal sinus cases, but some are antrum cases.

In regard to the teeth, there is no doubt that dental sepsis often causes antrum infection; but it is often secondary to the condition in the nose. One of such cases I will mention—a girl twenty years old who had an antrum condition. The dentist had treated her for three months, he had extracted a tooth and had then irrigated the antrum every day for three months, the discharge coming into the mouth. We used the X-Ray and found she had marked ethmoiditis. We curetted out the ethmoid cells, and discharge ceased and the cells closed up. In that case the antrum trouble was secondary to the chronic ethmoiditis, not the teeth.

I agree with Doctor Sanders in regard to prolonged irrigation of the antrum. It is not necessary to irrigate four or five times.

NOTES ON SOME TROPICAL DISEASES

By Bowman Corning Crowell, M. D., Professor of Pathology, Medical College, Charleston, S. C.

Presented to the Medical Society of South Carolina, Charleston, S. C., May 22, 1923

Tropical diseases differ from diseases existent outside of the tropics in no one essential feature, and the study of tropical disease consists in the study of disease as it exists in the tropics, modified in some ways by climate and by the conditions of living that prevail among tropical races. The study of the etiology of tropical diseases includes the study of some disease-bearing and disease-causing agents that find their most favorable habitat in warm climates, and the incidence and manifestations of other diseases are modified in the tropics by the conditions there existent.

Medicine, like the human race, had its birth in the tropics and the two for continued existence and progress must be con-

stantly receiving accessions from the colder parts of the earth. The investigation of disease in the tropics has led especially to the revelation of the important role played by animal parasites and vertebrate or invertebrate intermediary hosts and much of the knowledge gained in the tropics has been profitably given practical application in colder climates, in the disclosing of the methods of infection and the transmission of disease. In the tropics the conditions of disease have made necessary a close study of the fauna of these countries, and largely account for the relatively high state of perfection reached today by the science of Parasitology in all of its branches. Many of the methods pursued in the elucidation of tropical problems merit adoption in our own country. As a result of the visits of investigating scientists and commissions, knowledge of the insect life of many tropical countries is much more advanced than that of not a few of the colder countries, and the knowledge of the habits of the vectors of disease enables their noxious influence to be combatted. This appears to me to render advisable a more careful and comprehensive study of the fauna of our own country, for the sake of the aid it will be in the elimination of diseases already existent here, and the prevention of the entry of others.

It has been abundantly emphasized that the modern methods of transportation, lessening as they do the time between ports and favoring an increase of travel, are not an unmixed blessing, for by the same method diseased people, disease carriers, and disease transmitters gain an easier introduction into hospitable countries, where the presence of nonimmunes renders their ingress a potential danger. It is beyond a doubt that new diseases will in this way be introduced here, and medical men should have sufficient familiarity with them to recognize them, in order to safeguard their own populace. Also it needs no emphasis from me that a more careful inventory of the diseases already here existent should be

made, with the possibility of revealing some unsuspected causes of morbidity and mortality, that, while possibly of relatively slight importance now, may at any moment flare up and assume truly menacing proportions.

It is for this purpose that we wish to present for your consideration this evening some of the known facts concerning some diseases against which we should all be on our guard.

Dr. Johnson has given a fairly complete catalog of the diseases to which I have been referring, and it is my desire to present some concrete facts concerning a few of these diseases which it has been my good fortune to have an opportunity to study at close range.

In the time at my disposal I can refer only to those facts which I consider the most salient in each disease, and I am supplementing these remarks by a display of photographs, the majority of which are from personal cases.

MYCETOMA

Mycetoma is a chronic disease characterized by necrosis, swelling and deformity, with the formation of nodules, sinuses and ulcers, caused by fungi belonging to different genera and species which exist in the form of granules in the tissues, or in the discharge from the sinuses. Although usually localized, the disease may involve all portions of the body. Its best known manifestation is Madura foot.

Mycetoma is essentially a disease of tropical countries, and it would appear that heat and aridity are favorable for its development. It is not confined to the tropics and about thirty-three cases have been found in the United States. I have recently found a case here from Florida in a white person who wore shoes. It is most frequent in the barefooted.

Its clinical and pathological manifestations are remarkably uniform in spite of its diverse etiology. Its diagnosis rests in the finding of the granules in the discharge

from the sinuses or in the tissues. These are composed of colonies of the fungi and may be white, black, yellow, or red. Its progress is slow, and bone may be attacked as well as the soft tissues. Surgery is the only available treatment. The appearance is exhibited by the photographs.

YAWS

Yaws, or framboesia tropica, is a chronic infectious disease caused by *Treponema pertenue* and manifested by the presence of squamous, papillary, ulcerative and ser-piginous cutaneous lesions, with rare lesions on mucous surfaces.

It bears many points of resemblance to syphilis, passing through the same three stages.

Its geographic distribution is wide, being of highest incidence in tropical and subtropical countries.

It is transmitted by direct inoculation, and thus flies and other insects are important factors in its spread, transmitting the infection from one lesion to an abraded surface or ulcer on another person. Some immunity to the disease seems to be conferred.

It responds to Salvarsan treatment much more readily than does syphilis.

General symptoms of infection with glandular enlargement accompany the primary stage. In from six weeks to three months after the appearance of the mother yaw the secondary eruption occurs, simulating the mother yaw, but usually smaller and always multiple. See photographs.

CUTANEOUS LEISHMANIASIS

This disease is caused by leishmania tropica, a protozoan parasite almost indistinguishable from leishmania donovani and leishmania infantum, the causative agents respectively of adult and infantile Kalaazar. It is manifest by cutaneous and mucous lesions of a squamous, papillary or ulcerative character which continue for long periods of time unless treated. It is transmitted, in all probability, by the bite of an

insect, and the *Phlebotomus* has been accused but not proven guilty. A natural sequence of this is that it occurs on the exposed surfaces of the body. First discovered in India, it received various local names, such as Aleppo boil, Delhi boil, Biskra button, and later it was shown to exist in North Africa, Asia Minor, Syria, Persia, Italy and Greece. This type is generally known as Oriental sore. A similar disease exists in Central America, Brazil, Peru and the Guianas, differing from its Oriental relative in being often followed by ulcerative lesions of the nasal and buccal mucosa. It is variously known in South America as uta, espundia, boubas, and forest yaws. The lesion is severely pruriginous, and does not destroy bone.

Diagnosis rests on the finding of the parasite in scrapings from the margins of the ulcers.

The best treatment is tartar emetic.

SCHISTOSOMIASIS

There are three species of the genus *Schistosoma* that are pathogenic for man. These are blood flukes, *S. haematobium* causing especially the vesical bilharziasis which is so common in Egypt, Syria, Uganda, and South Africa, *S. japonicum* causing the Oriental intestinal disease, and *S. mansoni* causing the intestinal disease found in South America, the West Indies and the Congo Free State.

The intermediary host in each case is a snail, the genus of snail differing for each species of the fluke. Sporocysts in which the cercaria are developed form within the snail. These cercaria become liberated from the snail and swim about in the water. Persons bathing or wading in the water are attacked by them and the skin is penetrated. If one drink the water, the cercaria may penetrate the mucous membranes also. They enter the veins and are carried to the portal circulation, where they develop into the two sexes. The symptoms are due to the deposition of eggs.

In infection with the *S. haematobium*

the symptoms are those of polypoid and ulcerative cystitis with frequent vesical calculi with haematuria, and the diagnosis rests on the discovery of the terminal spined eggs in the urine.

In the Japanese form the eggs are with a small lateral spine and cause especially a polypoid and ulcerative colitis. The ova pass to the liver and cause a cirrhosis, this leading to the terminal picture in this disease which is characterized by small liver, ascites, cachexia and death. The ova may also be carried less frequently to other organs, such as the brain, causing the symptoms that correspond to the reaction to their presence. The diagnosis rests on the finding of the ova in the stools after ulceration has occurred, or in sections of the polyps of the intestine. In Japanese schistosomiasis the eggs are usually much more numerous than in cases of infection with the *S. mansoni*.

The symptoms due to *S. mansoni* cannot be differentiated from those of the *S. japonicum*, and the diagnosis is made by the finding of the lateral Spined egg in the stools or sections of the polyps. As a rule the ova are less numerous in the form due to the *S. mansoni* than they are in the Oriental form.

Infestation with the fluke should be suspected in cases of unexplained haematuria, and in cases of polypoid colitis, especially if the patient come from what is known to be an endemic focus.

AMERICAN TRYPANOSOMIASIS

This is a disease discovered by Chagas in Brazil, in 1909, caused by *Trypanosoma cruzi*, and transmitted by a blood sucking insect of the family of Reduviidae and species *Conorhinus megistus*. Its host in the outside world is a species of armadillo. As far as known at the present time this disease is restricted to certain parts of Brazil. Following a bite of the "barbeiro", the local name of the transmitting bug, the patient, usually an infant, falls sick with fever, general swelling, enlargement of lymph nodes, spleen and liver, and some-

times with bronchitis, keratitis and cutaneous manifestations. During a period of twenty to thirty days the parasite may be found in the peripheral blood. At the end of this period the child may die from cardiac or cerebral involvement. If the case becomes chronic the organism can no longer be found in the peripheral blood, as it becomes entirely a histoparasite, lodging in the tissues in an altered, nonflagellated, leishmania-like form. The patient becomes more or less invalided, the symptoms depending upon the organ most severely attacked by the organism. The heart and nervous systems are those producing the most frequent symptoms. In the chronic cardiac form all sorts of arrhythmias may be encountered, owing in part to the change in the myocardium proper, but chiefly to alterations in the primitive conducting bundles. Adams-Stokes syndrome is frequent in this disease. If the organism select the brain for especial attack, the symptoms depend upon the site and extent of the lesion produced. There may be extensive paralyses, and disturbances of mentality leading to the most severe grade of imbecility.

As a result of involvement of the endocrine glands various phenomena have been observed, such as cretenism, Addison's disease, etc.

In the acute stage the diagnosis is made by the finding of the parasite in the peripheral blood. In the chronic stage the diagnosis rests upon the symptomatology, and the organisms can be found in the tissues after death.

No known treatment is of any avail.

I have chosen to bring these diseases to your attention this evening merely as examples of the many diseases that, while little known in the United States at present, may at any time be introduced and spread widely unless recognized. This paper is dealing with no fable but a moral may be drawn. Federal and State, as well as local medical officers should do all in their power to prevent the introduction of

these diseases, but their duty does not end there. A closer study should be made of local conditions, especially in our Southern States, to find out whether the factors prevail which would favor the continuance of the diseases should they once gain entrance. As has been shown in this paper, this study would include a more accurate survey than has yet been made of the possible transmitting invertebrates and possible intermediary hosts. I know of no place where at the present time information is available on these points with anything approaching completeness.

A BRIEF SERIES OF UTERINE SUSPENSION CASES WITH FOLLOW UP RESULTS.

By John R. Boling, M. D., Columbia, S. C.

The literature is filled with voluminous articles on uterine suspension. During the past year especially has this subject been the cause of much discussion. By the time one who is trying to come to some definite conclusion as to the indications for this operation has read many of the articles he is so confused as to the indications and contraindications, or rather lack of indications that he despairs of anything definite to guide him.

Dr. L. J. Stacy of Rochester, Minn., in an article read before the section of Obstetrics, Gynecology and Abdominal Surgery at the 73rd session of American Medical Association in 1922, states that uncomplicated retroverted cases are not to be operated. His statistics collected from 1000 gynecological cases of which 202 were retroverted shows an aggravation of practically all symptoms to some degree in the cases of retroversion. There is an increase in headache, backache, lower abdominal pains and menorrhagia the latter being increased about 35%. However, as stated above he does not operate any cases of simple retroversions. Dr. Peter B. Salatch of New Orleans in an article read before the

Read before S. C. Medical Association Charleston, S. C., April 1923.

section of Obstetrics, Gynecology and Abdominal Surgery at the session of the American Medical Association held at Atlantic City 1919 cited cases of reflex neurosis, catatonia, epilepsy, etc., that were relieved by uterine suspension. He believes that retroversion is the cause of many symptoms that can be corrected by suspension. He was heavily scored by several well known men in the discussion that followed.

These instances are fair examples of what one finds in an effort to gain light on this subject.

I have been especially interested in results obtained in backache, headache and lower abdominal pain following uterine suspension. We all of course recognize the fact that flat foot, faulty position, focal infection, sacroiliac relaxation, malaria and constipation may be the cause of one or more of these conditions. These of course should be eliminated first.

Because of the great difference of opinion concerning this operation, I sent questionnaires to 125 cases that we have suspended for simple retroversion, with the hope that the replies might give me some definite idea as to the worthiness or worthlessness of this procedure. None of these cases are under 12 months nor over 36 months standing since operation. These reports I give to you are unbiased. I am trying to prove nothing. They are not as good as I at one time thought they would be, but even then they are considerably better than one would expect from reading some of the articles on the subject.

Total number of cases heard from—54.
Backache before op.

	Cured	Improved	Unimproved
47	14	12 55%	21 45%

Headache before op.

44	9	16 58%	21 42%
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Lower Abdom. pain

48	22	5 58%	20 42%
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Gained weight 25	Lost weight 5	Worse 6
Improved 39	76%	Unimproved 14 24%

It has not been our custom to do a uterine suspension for headache nor to suspend

every retroverted uterus. It is of interest, however, to note the improvement of this condition following suspension for some other cause or causes.

Certainly a definite per cent of these cases of headache are relieved. The cause therefore must be in the pelvis whether neurotic or otherwise. No doubt many symptoms are incorrectly attributed to this condition, the same may be said of almost any pathology.

Summary: With all these facts in mind and in spite of the criticism so often accorded this procedure, my conclusion as based on these records must be that there are numerous cases of simple retroversion with definite symptoms that can and should be relieved by suspension.

DISCUSSION DR. BOLING'S PAPER

DR. GEORGE BUNCH, (Columbia):

If you look back over your work you will find your impression is oftentimes one thing, and when you investigate the results completely they are another thing. Doctor Boling has gone about this in the proper way, he has gotten facts, and he has done something that few of us do. Why? Because it takes effort on our part. The preparation of this paper has cost him a lot of work. He had to send out questionnaires, then classify the answers and study them.

I think we ought to study every case and treat every case on its own merits. There are some, no doubt, of the plethoric type, who may have retroversion as they have other diseases - gall stones for instance - without apparent symptoms. But any woman with real retroversion would be better off if it were corrected. It is not the normal position of the uterus and it cannot function properly unless it is in the position Nature intended it to be. But let me caution you against the hysterical woman. These women have a lot of pelvic symptoms, but if there is no pathology in the pelvis when you open it, close it and leave it alone, because any operative procedure will make it worse instead of better. Surgery has nothing to offer unless there is some definite pathology to account for the symptoms.

DR. CARL EPPS, (Sumter):

I have found the Baldy operation is much

better than the old operation of suspension. I have operated on several cases that had the old operation, and only one was holding up as it should be. This one overdid the holding up—it held the abdomen and puckered it, so that it ached all the time. I would like to ask the doctor which operation he likes best.

DR. JOHN R. BOLING, (closing):

Answering Doctor Epps, I would say that it is customary to do the Kilion operation, in which the round ligaments are drawn out through the fascia.

You are all familiar with those cases that have gone the rounds for dysmenorrhoea. I am eliminating the neurotic type Doctor Bunch spoke of. But those who spend four or five days out of each month in bed, they are in search of relief. You have eliminated faulty pelvis, and these people must have relief. They cannot afford to be in bed one and a half months out of the year. If any of you were confined to bed that length of time each year you would undergo anything with a fair chance of relief. It is true all

these cases are not relieved even through they have definite retroversion, but there are some beautiful results, and some are entirely relieved of dysmenorrhoea. Those cases that have been confined to bed beginning the day before menstruation and through the entire period, are relieved so that they do not know when the period is coming on. Such cases are worth while.

Then there is the question of sterility. All these men who are afraid to do suspension admit that retroversion is sometimes the cause of sterility, and if these cases that have gone through a childless married life can be suspended and possibly conceive, there is nothing greater than that.

A case that is near the menopause is not a case for suspension. I do not suspend women in their early '40's or near the menopause. They require a hysterectomy rather than suspension. Since this paper was prepared Dr. Barron of Columbia brought to my mind a case he had suspended for persistent leucorrhoea an unmarried woman. He says he had perfect results. I have not looked into this question, but it is of interest if these cases can be relieved.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

BRODIES ABSCESS

A chronic solitary abscess affecting the cancellous structure of the end of a long bone is called a Brodies Abscess, it bearing the name of the man who first described the condition, Sir William Brodie.

Occasionally, it develops from a secondary infection of a long standing tuberculous condition.

Brodies abscess is always a chronic condition, never acute. It may result as a sequel of a respiratory infection, of typhoid fever, or of a previous acute staphylococcal osteomyelitis. It is practically always in the end of the bone, is rarely ever seen in the shaft, and it almost unknown in short or flat bones. It more fre-

quently affects the tibia, next, the femur, and third, the humerus.

In addition to the pus in the cavity itself, there is always found considerable granulation tissue.

The tendency is for the abscess cavity to slowly enlarge and as this goes on, the bone itself increases in size to a certain extent, but finally the cavity perforates the bony shell and ruptures into the "adjacent joint or onto the periosteal surface."

The symptoms vary with the stage of the process. At first there is gradual loss of function of the affected parts due to soreness on motion. At times the inflammatory reaction in the soft parts overlying are more marked than at others. The adjacent joint is frequently painful, swol-

len and though the patient may consider the joint itself as the seat of the trouble, yet careful palpation will usually detect the point of greatest tenderness in the end of the bone close to the joint.

A characteristic feature of the pain is that it is frequently absent for a period of days or weeks at a time, as is usual in duodenal ulcer. It then suddenly, acutely and severely returns to last for a variable period of a few minutes to an hour or longer.

In advanced cases the joint itself is larger than its fellow on the opposite side and the bone itself is definitely increased in size. Should the abscess break through the bone, another forms in the soft parts. The fever is up at times and the white cell count is increased. The X-ray is of the greatest value in definitely localizing the site of bone destruction. Cultures will reveal the predominating organism.

The treatment is osteotomy with drainage after the cavity has been thoroughly cleansed, curetted, and swabbed with pure carbolic acid, followed by alcohol.

Brodies abscess differs from Brodies joint in that the latter is purely a hysterical

phenomenon, and the symptoms vary with the patient's mental influences.

Brodies joint is most frequently in hysterical young women. There is no febrile change, no increase in the leucocyte count, no effusion, no sign of swelling or increase in joint size, and lastly the X-ray reveals no pathology. Careful examination always reveals the stigmata of hysteria in other parts of the body.

Whereas, Brodies abscess is always a chronic process, extending over a long period of time, and beginning in a very insidious manner, Charcots joint is a distinct osteo-arthritis, always sudden in onset, and usually begins as an effusion. It quickly disorganizes the joint structure, permitting undue lateral motion and rotation.

Almost pathognomonic of Charcots joint is the entire absence of pain in the affected parts, but as most Charcots joints are seen in luetic patients, there is frequently much suffering from gastric crises, which accompany the locomotor ataxia. These joints usually assume enormous proportions so great is the swelling and the accompanying bony and periarticular changes.

Rarely, if ever, does repair take place.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

CLINICAL OBSERVATIONS WITH ACRIFLAVINE IN THE TREATMENT OF 200 CASES OF GONORRHEA. Arthur J. and Monroe E. Greenberger, New York. The Urologic and Cutaneous Review, July, 1923.

The writers have outlined their method of treatment as follows:

"Acute Gonorrhea.-Treatment instituted as early as possible with the following procedure:

1. Irrigation of the anterior urethra with 500 c. c. of the acriflavine solution.
2. Retention of about 8 c. c. of the solution in the urethra for five minutes.
3. This procedure is repeated twice daily.

Sub-Acute Gonorrhea.-When the acute symptoms have subsided and the patient complains of a "morning drop" and both urines are cloudy we do not hesitate to irrigate the bladder. Procedure in these cases has been as follows:

1. Irrigation of the anterior urethra with 50 c. c. of the acriflavine solution.
2. Irrigation of the bladder with 100 c. c. of the solution.
3. The patient voids and the irrigation is again repeated.
4. Patient retains 100 c. c. of the solution in the bladder for about one hour.
5. The above treatment is given once daily.

Chronic Gonorrhea (Prostatic and Vesicular Origin).-

Having localized the lesion to the prostate, seminal vesicles or both, we proceed as follows:

1. Irrigation of the anterior urethra with 50 c. c. of the acriflavine solution.

2. Bladder filled with 150 c. c. of the solution.

3. Prostatic and vesicular massage.

4. Patient voids, and then.

5. The bladder is filled with 100 c. c. of the solution to be retained for about one hour.

6. The treatment is given every three to seven days.

In our office practice we have proceeded along the general lines as enumerated above always maintaining the success of the treatment depended not only upon the action of the acriflavine but also upon the following factors:

1. The use of a freshly prepared 1-4,000 acriflavine solution in normal saline.

2. The use of 500 c. c. of the solution to a treatment.

3. Temperature of the solution between C. 35-40 degrees.

4. Treatment of each patient at our office only; doing away entirely with self hand-injection."

The authors have concluded from the results obtained in 200 cases treated as outlined above: "We are of the opinion that with a 1-4000 acriflavine solution in normal saline at a temperature of between 35 to 40 C., the results are distinctly more encouraging than with the organic silver preparations in common use in the treatment of acute specific and non-specific urethritis."

SOCIETY REPORTS

REGULAR MEETING GREENVILLE COUNTY MEDICAL SOCIETY, HOTEL IMPERIAL JULY 2, 1923

The members and the invited guests gathered in the dinning room of the Hotel Imperial at 7:30 o'clock, at which time an excellent supper was served. There were present 36 members and five guests, Mr. Allen Graham and Prof. George Buist from physicians, Dr. O. L. Miller from Gastonia, the Board of Governors, Dr. R. E. Trusdale, a local minister, popular with local No. C. and Dr. Wm. deb. MacNider from the Medical Department of the University of North Carolina.

At half after eight, Dr. T. R. W. Wilson called the meeting to order. The minutes of the previous meeting were read and approved as read. Business was then called, but there was no response.

Dr. Wilson introduced Dr. MacNider as the speaker of the evening, and announced as his subject Acute Bichloride Intoxication. Dr. MacNider speaking without notes, began with a general consideration of the significance and the meaning of the condition of acidosis stressing the fact that the body cells and tissues are accustomed to a certain type of environment, and that an excess of either acid or alkaline substances in the body fluids, regardless of their source produces a changed environment, and hence tends to produce disturbed function or even cell destruction with these introductory remarks, the speaker passed into a discussion of his subject proper, treating it in a delightfully simple and direct manner. When he had finished he showed a series of lantern slides illustrating the change which occurs in the Kidney during the three stages of bichloride. Intoxication, together with what at times

may occur when an alkali is judiciously administered. There followed lively, interested and general discussion of the paper and related topics, together with many questions asked the doctor.

The meeting adjourned.

J. D. Guess, Secretary,

NEWBERRY COUNTY. MEDICAL SOCIETY

The Newberry County Medical Society held a meeting April 14th, at Newberry, S. C. with President J. M. Kibler in the chair. Ten members were present. The minutes were read and approved. An excellent paper was read by Dr. J. M. Kibler on "Acute Infective Osteomyelitis." This paper was discussed very lively by all the members of the society.

John K. Wicker, Secretary.
Greenville County Medical Society
Greenville, S. C.

FIRST DISTRICT MEDICAL SOCIETY

The Medical Society of the first district of South Carolina has been steadily growing since its organization six years ago. On May 22nd. our spring session was held at St. George, and, in spite of the inclemency of the weather, and unfavorable road conditions, the attendance was very good.

The meeting was, as previously arranged, devoted entirely to discussion of pediatric subjects; and there were several case reports which elicited profuse discussion between the members and visitors. The principal speakers were Dr. W. P. Cornell, of Columbia, who discussed the causes and treatment of acidosis, and Dr. M. W. Beach, of Charleston, who read a paper on meningococcus infection. The local mem-

bers presented a patient with congenital dextrocardia for demonstration.

Our next meeting will be held at Roper Hospital, Charleston, S. C., in November. The following officers were elected for the ensuing year: J. C. Mitchell, President, W. M. Simons, Vice-President, and W. S. Judy, Secretary.

After adjournment the members were served a luncheon at the Masonic Temple by the ladies of the town.

W. S. Judy, Secretary.

SEVENTH DISTRICT MEDICAL ASSOCIATION MEETING

*Annual Session Held at Bishopville,
July 5th.*

The annual meeting of the Seventh District Medical Association, held at Bishopville, on Thursday, July 5th, proved to be a decided success, both from a social and scientific standpoint. Thirty-six physicians were in attendance, and all apparently enjoyed the occasion thoroughly. The business sessions were held in the Court House. During recess, a splendid dinner, excellently prepared, was tastefully served in the Chamber of Commerce Hall.

The program was as follows:

Invocation—Rev. McKeiver of Bishopville.

Address of Welcome—Mayor M. B. McCutchen.

Address on behalf of Lee County Medical Association—Dr. R. O. McCutchen, of Bishopville.

Response—Dr. H. M. Stuckey, of Sumter.

Then followed the scientific program:

"Multiple Sensitization"—Dr. Hal M. Davison, of Atlanta.

"Insulin in the Treatment of Diabetes"

—Dr. Robert Wilson, Jr., Charleston.

"Iritis"—Dr. L. O. Mauldin, Greenville.

"The Present Status of X-Ray and Radium Treatment"—Dr. Leonard J. Ravenel, of Florence.

"Treatment of Bichloride of Mercury Poisoning with Calcium Sulphide, and Report of Case"—Dr. E. T. Kelley, of Kingstree.

"Why Peptic Ulcer Should be Treated Surgically"—Dr. W. E. Mills, of Sumter.

"Items; Varieties; Symptoms; Treatment"—Dr. Charles J. Lemmon, of Sumter.

"The present Status of Gastrojejunostomy; With Case Reports"—Dr. Carl B. Epps, of Sumter.

"The Advantages of Laboratory Findings to the General Practitioner"—Dr. W. M. Goldsborough, of Sumter.

Timely after dinner speeches were made by Mr. W. A. Stuckey, president of the Bishopville Chamber of Commerce, and Hon. H. C. Jennings, member of the house of representatives, from Lee county.

Next year the association is to meet with the Clarendon County Medical Association.

The officers for the ensuing year are as follows:

Councilor, Dr. T. R. Littlejohn, of Sumter.

President, Dr. W. Scott Harvin, of Manning.

Vice-President: For Clarendon County, Dr. T. J. Davis, of Manning; for Georgetown county, Dr. F. A. Bell, Georgetown; for Lee County, Dr. R. O. McCutchen, of Bishopville; for Sumter county, Dr. H. M. Stuckey, of Sumter; and for Williamsburg county, Dr. T. S. Hemingway, of Kingstree.

Secretary-Treasurer, Dr. Carl B. Epps of Sumter.

C. B. Epps, Secretary.

MINUTES

MINUTES OF HOUSE OF DELEGATES (Continued)

Mr President. In submitting my annual report as Councilor of the second district, confusing the counties of Calhoun, Edgefield, Orangeburg, Lexington, Richland, and Saluda, I beg to say that I have visited part of my county Societies. The others did not meet, neither did they reply to the cards sent out, though they are all organized and are working in harmony together.

Three of our Societies meet regular and have very good attendance and programs. We have a very active district Society that meets twice a year. These meetings are always well attended and usually have very good programs.

So far as I am informed we haven't any illegal practitioners in our district, though we have quite a number of quacks in our midst which is deplored. I am somewhat at a loss as to what suggestions to make but I will have something to say along these lines later.

Respectfully submitted,
Samuel Harmon, M. D.
Councilor of the Second District.

REPORT FROM THIRD DISTRICT

Gentlemen of the Convention: I beg to report from the Third District.

This district is composed of Laurens, Newberry, Greenwood, Abbeville and McCormick Counties. All of our Societies are alive and operating.

I am making you this report based on the report of the Secretaries by the Annual Score Card.

The total enrollment of this district is 73 members. We have 40 eligible men not enrolled; some of these men are retired practitioners on account of age. The average attendance upon the whole on Medical Societies is 60 per cent.

We have only 4 illegal practitioners reported in the district; two of these are old men and have practiced in isolated regions for a long time, one of these is a graduate, one of these a Chiropractor.

We had our regular successful District

Meeting in Newberry last year and go to Greenwood this year. We have lost 3 of our excellent men by death. These men will probably be memorialized by the committee on Necrology.

Very respectfully submitted,
T. L. Bailey.

REPORT OF THE FOURTH DISTRICT COUNCILOR

Mr. Chairman and Gentlemen of the House of Delegates.

The Fourth District is composed of the Counties of Anderson, Cherokee, Greenville, Oconee, Pickens, Spartanburg and Union and has a total membership of 216. The societies meet regularly in all the counties and harmony as a rule prevails throughout the district. The attendance for the past year has been above the average and the interest taken in society meetings has increased wonderfully.

Union County has a membership of thirteen members; had fifteen meetings during the year with an average attendance of six members. Cherokee County has twelve members, had twelve meetings during the year with an average attendance of nine. Oconee County has fourteen members, had an average attendance of eight members. It should be said to the credit of this county that the Oconee County Society put on one of the largest Child Welfare Clinics on Sept. 27th of last year ever held in the State. This clinic was put across effectively by the aid of the State Board of Health and several invited physicians. These clinics are designed to call the laity to the importance of necessary medical and surgical attention to the individual in childhood and this is becoming more and more important as the impression becomes deeper engrafted into the minds of the people, for it is in childhood that the foundation of one's health is laid. Every county in the State that cannot have a county health officer with a County Board of Health should, as Oconee County has done, avail itself of the services of the Bureau of Child Hygiene of the State Board of Health. The Pickens County Medical Society has a membership of twenty-three, had

twelve meetings last year with an average attendance of over 60. This society has the distinction of holding a clinic and health day at Central, S. C. last summer with the physicians of Central as the Host and with invited physicians from the county and district as Guests. This clinic idea is a capital one for it gets the physicians from the stereotyped thoughts and expressions that are usually brought forth in the average paper. Another thing about this society is that it does not encourage the speaking on topics without reading them and the discussion of clinical cases and the presentation of practical cases.

The Spartanburg County Medical Society entertained the Fourth District Medical Association last fall in the City of Spartanburg. Some splendid papers were read and discussed and a day of scientific interest was spent by the members who attended.

Greenville County has a membership of fifty-seven, had twelve meetings during the year with an average attendance of thirty. Many interesting programmes have been arranged by this society at which invited speakers from other cities have presented splendid papers.

Anderson County has a membership of forty one, had twelve meetings during the year with an average attendance of twenty-two. The Legislature Delegation of this County has provided a fund for County Health Officer.

It has been the pleasure of the councilor to visit all these societies once during the year at a regular meeting and it was interesting to see that good work is being done by all of the societies.

Respectfully submitted,

L. O. Mauldin, M. D.,
Councilor for the Fourth District.

COUNCILOR'S REPORT OF THE FIFTH DISTRICT MEDICAL ASSOCIATION

The fifth district is composed of Chester, Fairfield, Kershaw, Lancaster and York counties. Chester reports 19 members on the roll, four meetings held during the year; eligible members not on roster 6; illegal practitioners 1. Neither councilor nor any state officer visited society during the year. Fairfield county reports 11 members on the roll; no meetings reported during the year; no illegal practitioners reported; neither councilor nor state officer visited society during the year.

Kershaw county reports 11 members on the roll; 12 meetings held during the year with an average attendance of 50 per cent; 3 eligible members not on roster; no illegal practitioners reported in the county; neither councilor nor state officer visited society during the year.

Lancaster county reports 17 members on roll; number of meetings and average attendance not reported; 6 eligible members not on roster; no illegal practitioners reported in the county. Neither councilor nor state officer visited the society during the year.

York county reports 32 members on the roll; meetings held during the year, four; average attendance, 10; illegal practitioners in county, 1. Councilor and state officers visited society during the year.

Two district meetings were held during the year, one at Great Falls and one at Lancaster. Both of these meetings were well attended, and good programs were carried out. At Great Falls the members and visitors were given a picnic dinner, and at Lancaster dinner was served at the hotel.

Respectfully submitted,

Thos. N. Dulin, Councilor.

REPORT OF SIXTH COUNCILOR DISTRICT

Mr. President and members of the House of Delegates,

The Sixth District comprises the counties of Florence, Darlington, Chesterfield, Marlboro, Dillon, Marion, and Horry. The societies are all well organized and have done particularly well this year,

Florence County has 35 members on roster. The average attendance is 15. They meet monthly. There are two illegal practitioners in the County. There are four eligible physicians not on roster.

Darlington County has twenty-five members on roll, and meet quarterly. Average attendance about ten. There are five eligible physicians not on roster. No illegal Practitioners.

Chesterfield County has ten members on roll. Meet bi-monthly, average attendance 6. There are eight eligible physicians not on roster. One illegal practitioner in County. The secretary says that four of the eight not on roster have promised to join society.

Marlboro County has seventeen members on roll, average attendance seven. Two eligible physicians not on roster. No illegal

practitioners. Meet monthly. Marlboro has a big "get-together" meeting annually and there is always a good program and dinner, with many visiting physicians. Attendance of this meeting averages about 60, and it is quite a success.

Marion County has 8 members on roll, meets bi-monthly. Average attendance 7. No illegal practitioners.

Dillon County has 15 members on roll, average attendance about 10.

Has two eligible physicians not on roster. No illegal practitioners. Society has had good attendance and reports good work.

Horry County has 11 members on roll, meets quarterly, average attendance about 6. No eligible members not on roster. Two illegal practitioners.

The counties of Horry, Marion and Dillon organized in July, 1922 and now constitute the Little Pee Dee Medical Society. They meet bi-monthly, alternating with each other, with excellent results. Its success has been most encouraging, the attendance is large, and they always have a splendid program, with good fellowship and a good dinner. I had the pleasure of attending the Mullins meeting and was very much impressed with the splendid organization.

The Pee Dee Medical Society is the official 6th District Society, and the oldest in the state. It meets at Florence annually, and is always enjoyed by members over the district.

Charles R. May.

REPORT OF THE COUNCILOR OF SEVENTH MEDICAL DISTRICT

District meeting held in Kingstree July 6th, and was attended by thirty-five physicians. There was a splendid scientific program, and a most excellent barbecue. All the counties in the district were well represented. We are to meet this year in Bishopville on July 5th and the prospects are good for this meeting.

Lee County reorganized on March 9th, of this year. This meeting was attended by the Councilor. After the reorganization meeting we had a good banquet.

The following are the reports from the counties; Georgetown. Number members on roll 6; average number meetings during year 6; average attendance 6; four eligible members not now on roster; no illegal practitioners in the county; no Councilor or State Association officer visited the county

during the year. Had an injunction (permanent) served on one Thomas J. Connelly (colored) for practicing medicine without license.

Sumter—Number members on roll 22; Average number meetings during year 9; average attendance 10; number of eligible members not now on roster 4; no illegal practitioners in the county; Councilor visited the Society during the year. We have a live Society, well attended, good scientific papers, freely discussed. Good Fellowship prevails.

Williamsburg—Number members on roll 12; number meetings during year 9; average attendance 6; eligible members not now on roster 4; number illegal practitioners in county one; President and Councilor visited the Society during the year. Unable to get a report from Clarendon or Lee County.

Respectfully submitted,

T. R. Littlejohn, M. D.,
Councilor Seventh Medical District.

REPORT OF COUNCILOR OF EIGHTH DISTRICT

The Eighth district is composed of the following counties: Aiken, Allendale, Bamberg, Barnwell and Hampton, all of which I have visited during the year with the exception of Aiken, which is inactive.

The condition of all of the other societies of the district is satisfactory.

The Hampton county society, which has been inactive for several years, has been reorganized. This was accomplished with the assistance of our worthy president, Dr. Fred Williams.

This society is composed of men of the highest type, and having taken on new vigor, we expect from them very gratifying results.

There are two illegal practitioners in the district,—one physician and one chiropractor.

We have had two very good district meetings during the year.

Your councilor prosecuted a colored physician, Dr. A. B. McTieme, for practicing criminal abortion. This was done on the strength of substantial evidence furnished by three of our doctors. The law firm of Carter, Carter, and Kearsse of Bamberg offered their services in prosecuting the case. When the case was called, however, the prisoner could not be located. The Judge ordered that the bond of \$500.00 be escheat-

ed, and efforts be made to locate the prisoner.

I have recently heard that Dr. McTiere is now a resident of Canada.

Respectfully submitted,
Lighton A. Hartzog,
Councilor 8th Dist.
(To be Continued)

-:-

ABSTRACTS

-:-

PEDIATRICS AND THE CHILD

The added knowledge that the physician must have to become a pediatrician, Borden S. Veeder, *St. Louis Journal A. M. A.*, Aug. 18, 1923), says, is a knowledge of the child. This requires (1) a knowledge of the physical growth and development of the child and the factors which affect it—or nutrition, and (2) a knowledge of the mental development and psychology of the child. There is an old conception of the pediatrician as the physician who devoted himself to infant feeding—a conception still erroneously held by many today, including even a few specialists. The entire question of the nutrition of the older child has been, with few exceptions, a development of the last few years, and it has been found to be a field of almost equal importance with that of the infant, and a field susceptible of almost limitless exploration. A knowledge of the psychology of childhood is as essential to the pediatrician as a knowledge of disease, as it is an integral part of the development of the child, and without it one cannot understand many of the factors influencing physical growth. Child hygiene is at present the most important motif in pediatrics. In child hygiene work it has been the child that has been the topic of consideration—not disease or medicine. Child hygiene is nothing more than the application to the individual of the measures that lead to the normal growth and development of the child, and the methods by which these measures can be applied to large numbers of children. It includes not only physical health but also mental health. The change in conception

of the physician from the healer of disease to the counselor of health is the great advance made by the present era of medicine, despite the tremendous impetus and eclat that have been associated with medical research in the last few years; and this is particularly true in the field of pediatrics. The reduction in infant mortality, which is the proudest achievement of pediatrics, has not been due primarily to the development of any method of artificial feeding or to the study of disease, but to education in hygiene and the study and correction of the environmental factors which lower the physical well-being of the infant.

THE CYTOLOGIC DIAGNOSIS OF NEOPLASMS

William Carpenter MacCarty, Rochester, Minn. *Journal A. M. A.*, Aug. 18, 1923), shows the need for a new method of observation and a new method of applying a knowledge of morbid anatomy to the actual practice of medicine by means of three tables; one showing the percentage of incorrect preoperative clinical diagnoses which average as high as 11.2 per cent.; a second showing the percentage of cases in which clinicians avoid making a positive diagnosis, from 4 per cent. to as high as 77 per cent., and the third showing the percentage of absolutely necessary microscopic diagnoses in a series of 12,964 specimens from 24,368 surgical operations, reaching as high as 95 per cent. MacCarty asserts that by oil lens studies of perfectly fresh living cells with or without Unna's polychrome methylene blue or vital stains, such

diagnoses are being made by him almost daily, and checked clinically. A bit of tissue, immediately on removal, is placed on the stage of a freezing microtome, frozen, and cut from 5 to 15 microns thick. The section is then placed in physiologic sodium chlorid solution and unrolled. It is then dipped by means of a glass lifter into a strong solution of Unna's polychrome methylene blue from one to ten seconds, and then transferred to and washed in physiologic sodium chlorid solution, from which it is transferred to Brun's glucose, from which it is almost immediately drawn up on a slide and studied. When such a preparation is properly made, the only part of the regenerative and neoplastic cells which stains is the nucleolus. The differentiation between regenerative cells, partially or completely differentiated cells and the undifferentiated cells of malignant neoplasms may be made, provided the examiner is familiar with the high power morphology of normal adult cells of the differentiated tissues of the human body, and has a knowledge of the normal phases of differentiation in the normal regeneration of tissues.

OCULAR DISTURBANCES IN PREGNANCY AND DURING THE PUERPERIUM

In four cases of neuroretinitis of pregnancy with marked albuminuria and marked reduction of vision that have come under his observation, Nelson M. Black, Milwaukee (*Journal A. M. A.*, Aug. 18, 1923), found in each case extremely active infectious processes in the teeth and tonsils. Unfortunately, the damage to the eyes had already occurred, but improvement in the ocular condition, which in two cases was marked, and in the other two slight, did not take place until treatment was directed to the infected teeth and tonsils. Black suggests the advisability of making, during gestation, in addition to the early frequent examinations of the urine which is practically always done, a search for possible foci of infection, especially in the teeth, paranasal sinuses and tonsils, and correct morbid processes when found, rather than running the risk of allowing the patient to proceed to term with possibility of having to terminate pregnancy in order to save life or preserve vision. It is also suggested that visual examinations should be made, as a routine, during the latter months of pregnancy, with especial regard to the fundus and visual fields.

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CONTENTS

EDITORIAL DEPARTMENT:

Death of Dr. Munnerlyn	579
Death of Dr. Pennel	579
Edgefield Society Reorganized	580

ORIGINAL ARTICLES:

The Problem of Cardio—Vascular—Renal Disease by Robt. Wilson, Jr., M. D., Charleston, S. C.	580
The Significance of Bladder Symptoms by Milton Weinberg, M. D., Sumter, S. C.	586
The Pharmacology of Certain Endocrine Glands by W. H. Zeigler, Charleston, S. C.	590

(Contents continued on page ii.)

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SOCIETY REPORTS	594
PUBLIC HEALTH DEPARTMENT.....	595
SURGERY DEPARTMENT	596
UROLOGY DEPARTMENT	597
PEDIATRICS DEPARTMENT	598
MINUTES	599

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OF THE

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EDITORIAL

DEATH OF DR. MUNNERLYN

The death of Dr. J. F. Munnerlyn, Medical Director of the State Hospital for the Insane August 25th, is a great loss to the South Carolina Medical Association. Dr. Munnerlyn was for a long time an associate editor of the Journal, and contributed many articles of more than ordinary interest. His papers were always of a high scientific character, clear-cut, and to the point.

DEATH OF DR. PENNEL

We are indebted to the President of the State Medical Association for information in regard to the death of Dr. Pennel. A most valuable paper read by Dr. Pennel at the Charleston meeting on the subject of "Eclampsia" appeared in the July issue of the Journal.

DR. THOMAS PENNEL

Dr. Thomas Pennel of Belton, S. C. and a member of the Anderson County Medical Society died on June 29th, in the City of New York where he was pursuing Post Graduate work in Sloanes Maternity Hospital.

Dr. Pennel was a graduate from the Atlanta College of Physicians and Surgeons in the Class 1923 and has practiced at Belton for a number of years since, but for the last few years he has pursued Post Graduate work in Sloanes Maternity Hospital with the view of becoming a specialist in Obstetrics. Dr. Pennel at the time of his sudden death was 40 years old and in the prime of his activity and usefulness. He developed Pneumonia and died in a few days. Dr.

Pennel is greatly missed by the profession of this state and by the people in the community in which he labored. He leaves a wife and two children (Boys) towards whom the Medical Profession has the tenderest sympathy.

L. O. Mauldin.

EDGEFIELD SOCIETY REORGANIZED

We publish elsewhere in this issue a report of the reorganization of the Edgefield

County Society. The news will be received with great interest by the Councilors and other officers of the State Medical Association. The spirit manifested at the reorganization meeting will undoubtedly prove to be communicable in its nature and thus spread to other parts of the state. There is no good reason why all of the smaller county societies should not take on new life now that normal conditions generally prevail.

ORIGINAL ARTICLES

THE PROBLEM OF CARDIO— VASCULAR—RENAL DISEASE

By Robert Wilson, Jr., M. D. Charleston, S. C.

The term cardio-vascular-renal disease is used to designate a group of pathological conditions which depend upon vascular degeneration. The justification for the use of such a cumbersome name is to be found in the constancy with which the heart and the kidneys suffer as a result of the vascular disease. It would be better to speak of arteriosclerosis with localization in the vessels of the various organs, especially in those of the kidneys, the brain, the heart, the stomach and the splanchnic area.

The disease is usually associated with elevation of vascular tension, and the term high blood pressure has taken strong hold of the lay mind often causing much mental perturbation, a situation for which medical men are largely responsible, for they too often express themselves to their patients with an unwarranted degree of assurance and certainty. Our knowledge of this subject, as a matter of fact, is very

limited, and much that passes for truth is speculation.

The heart and the blood vessels must be considered as a single organ whose function is the maintenance of the circulation, but with differentiation of structure and of function into four divisions viz. the heart, the arteries, the capillaries and the veins. No one of these divisions can be diseased without sooner or later involving the other divisions, nor without affecting the various organs of the body whose functional activity is dependant upon a normal vascular supply.

The volume of blood which leaves the heart in systole is received by the arteries whose elasticity enables them to accommodate the increased amount which during diastole is expelled into the capillary bed and thence into the veins. The factors concerned are the heart muscle and the elasticity of the arteries together with peripheral resistance. As long as the volume of blood which is delivered into the capillaries equals the amount delivered by the heart into the arteries an even balance is maintained, and to maintain this balance under varying conditions the heart and arteries exert varying degrees of force which occasion differences in pressure. The factor of the viscosity of the blood it is unnecessary to consider here. The different portions of

the cardio-vascular system are nicely adjusted to each other so that variations in one portion are compensated by changes in another. This may be illustrated by the effect of a full meal which is associated with dilatation of the vessels of the splanchnic area, and in order to compensate for the withdrawal of blood from the aorta and large vessels which would produce a lowering of pressure the heart responds by beating more forcibly and throwing a larger volume of blood into the aorta. With an increase in the peripheral resistance the heart and arteries both respond to prevent a disturbance of balance, the former by stronger contractions to increase the force by which the blood stream is driven, and the latter by heightened tonicity to ensure the continuance of a sufficiently forcible movement during diastole. Increased peripheral resistance was formerly attributed solely to the arteries, especially to the arterioles, but attention is now directed to the tonicity of the tissues and of the capillaries as important factors. We do not know very much about the tonicity of the tissues and our knowledge of the capillary tonicity is still scant, but a great deal of study has been made of the capillary circulation. It is now known that the capillaries are supplied with nerves and that they are subject to dilatation and contraction. Rise in capillary pressure is associated with a rise in the general blood pressure, although exceptions do occur. When we call to mind the extent of the capillary area and its function of carrying to the veins in even flow an equal quantity of blood to that received from the left ventricle we can readily understand how limitation of this field would call for increased work on the part of the heart and arteries to carry on a flow sufficient in volume and force to meet the requirements of a normal circulation. There are not a few investigators who believe that the initial disturbance lies in the capillary field, and there seems to be no doubt that in arteriosclerosis the capillaries share in the morbid state as indicated by

their tortuosity. Capillary stasis on the other hand is associated with a fall in general blood pressure.

While admitting the force of the arguments in favor of the capillary area as the seat of the initial process, I feel that we cannot discard entirely the possibility of the arterioles opposing the primary resistance to the blood stream which calls for the increased effort which expresses itself clinically in an elevation of blood pressure. We may conceive of this resistance whether in the arterioles or in the capillaries as due to a tonic contraction or to a diminution of the caliber due to thickening. In the one case we shall have what is termed essential hypertension and in the other hypertension due to arteriosclerosis. Some writers (Frey) regard hypertension as a reflex phenomenon, as for example when oxygen deficiency causes the production of lactic acid which reflexly raises blood pressure. The functional hypertension of nephritis is attributed to the action of retained waste products. Arteriosclerotic changes are probably the result of chronic infections, or of intoxications such as might occur from blind abscesses at the roots of teeth or from other infective foci. These changes might be initiated also by the acute infections such as typhoid fever. It has been suggested that arteriosclerosis is such a common senile development because a long life affords a longer opportunity for the action of such toxins. Cases of hypertension which in their inception are primarily functional in the opinion of some authorities may become arteriosclerotic if allowed to continue through a long period of time. It is quite probable that heredity may play an important part. It is not difficult to pick out families in which for several generations there may be noted a distinct tendency for deaths to occur from myocardial degeneration, chronic nephritis, angina pectoris or cerebral hemorrhage.

Increased blood pressure then is the result of an increased resistance in the arter-

ioles or in the capillaries, to overcome which, the heart beats with increased force and the arteries manifest a heightened tonicity. It may be regarded as a compensatory process by means of which nature is able to secure for the time being an adequate circulation. That it is purely a compensatory process, however, is not accepted universally. Smith and Shackelford, for example, (International Clinics, Series 31, 1921) take exception to this view basing their opinion upon extensive observation of cases in hospitals and in private practice.

The causes which bring about this increased resistance, other than the infections and intoxications, already alluded to, are not well understood. Alcohol, tobacco, caffeine, high protein diet, overwork, mental anxiety are the main factors which are supposed to be causative agents. Of these mental and nervous strain, especially when associated with physical strain are perhaps the most important. There is not sufficient evidence to incriminate alcohol and tobacco; excessive use of caffeine may be a factor, but it is doubtful if moderate use has an untoward effect. Excessive eating is probably injurious, but there is no satisfactory proof of the belief that proteins are particularly dangerous, nor is there justification for the common superstition that red meats are more deleterious than white. The influence of the endocrine glands has been much discussed, but so far very little headway has been made in elucidating this obscure subject. It is quite probable that the stimulation of certain of these glands with the consequent over-production of pressor substances may be the mechanism by which toxins circulating in the blood produce their effects upon the vessels. The disturbance of endocrine balance is very probably the cause of the high blood pressure which is so common among women at, and after, menopause.

The effects of high blood pressure depends upon the extent and the localization of the vascular damage. High blood pres-

sure, itself does not produce symptoms; these are produced in every case by disturbances of function of the organ to which the symptoms are referred by altered blood supply, which in turn is dependent upon the vascular disease. It is important to have this clearly in mind. Many persons with a systolic blood pressure of 200, 250, or even higher are comfortable and symptomless, while others whose systolic pressure may be no higher than 160, or even lower, manifest evidences of diseased heart or brain or kidneys.

The difficulty of correlating symptoms with blood pressure readings may be illustrated by a patient whom I have had under observation for about five years. He had damaged kidneys for several years before he fell into my hands. He suffers at times with anginose pains, with vertigo, with palpitation and with breathlessness; he has had occasional oedema of the lower extremities and on one occasion raised blood tinged sputum. An analysis of his record shows that he complained of anginose pain seventeen times with pressure readings varying from 180-90 to 120-70, of vertigo 7 times with pressure from 180-95 to 120-70, of palpitation once with pressure of 185-90. He had slight oedema of the lower extremities with pressure readings from 190-95 to 170-85, and the blood tinged sputum appeared with a pressure of 145-90.

In estimating the significance of pressure readings it is most important to consider the diastolic pressure which is subject to less variation than the systolic and which is a better index of the degree of peripheral resistance, and therefore, a more certain measure of the work which the heart and vessels are doing. The systolic pressure is much more subject to emotional influences. It is not uncommon to see the systolic pressure rise considerably as a result of mental excitement without a corresponding elevation of diastolic pressure. A falling systolic pressure

with a constant diastolic pressure is of a graver importance.

Much stress is often laid upon the relation of blood pressure to age and certain standards have been set down for guidance in determining the normal pressure for a given age. Such standards, I believe, are fallacious. We are not in a position as yet to set down definite formulas. In evaluating the importance of our findings in any case we must take into consideration all the factors involved, especially the condition of the heart, of the kidneys, and of the vessel walls, the occupation and the habits of the patient, the age, what symptoms, if any, the patient presents. The symptoms presented will depend upon the localization of the arterial damage. The important localizations are cerebral, cardiac, renal, gastric and splanchnic. Cerebral localization of arteriosclerosis gives rise to headache, vertigo, transient aphasia, softening and mental degeneration and paralysis from thrombosis and hemorrhage. These phenomena are all of such common occurrence and are so easily recognized that I shall not take up your time with a detailed discussion. I wish, however, to refer to one or two points.

Not infrequently patients with arteriosclerosis who are apparently quite well suddenly develop aphasia, or paralysis more or less extensive, which passes off in a very short while. Sometimes these transient phenomena recur several times and may be followed by permanent paralysis or cerebral softening. It is customary to explain these conditions by assuming that the artery or arteries involved have been the seat of a temporary spasmodic constriction which has cut off the blood supply from the affected area and that as soon as the constriction has disappeared, as spontaneously as it appeared, function is restored. We have to assume that there has been a complete spasmodic constriction of the artery supplying the affected area, Brocas center let us say, or that the entire capillary field is

thus involved. That arteries may be the seat of spasm is demonstrable, but it seems very improbable that a sclerotic vessel whose walls are thickened and more or less stiff should manifest this phenomenon. I am inclined to doubt it, and would suggest as more rational the conception of capillary congestion with exudation which means localized oedema. Let me illustrate. A patient is seized with a transient aphasia during a meal. The effect of a meal in producing increased pressure has been mentioned. Now if the capillary bed is restricted by disease the sudden increase in the amount of blood driven into it may overflow it because of its limited power to empty itself with sufficient rapidity to prevent stasis. The result will be exudation with oedema and pressure upon the cell elements. As soon as the circulation becomes stabilized again absorption will take place with the disappearance of the pressure symptoms. The same chain of events would follow excitement, exertion or anything which tends to increase temporarily local blood pressure. It is also possible that certain toxins may cause capillary contraction which would produce the same condition. Pathologists have given us very little information with regard to the condition of the venules in arteriosclerosis; but it is possible that the cause of capillary congestion may be found here.

Cerebral hemorrhage is due to the rupture of a blood vessel at the site of a miliary aneurism. Patients are often told that because the blood pressure is very high, say 250 systolic, they are in danger of cerebral hemorrhage. This is true only because the high pressure is an indication of arterial disease, not necessarily because of the high pressure per se. A patient whose systolic pressure is 150 or 160 may be actually in greater danger of arterial rupture than one whose systolic pressure is a hundred points higher if there are miliary aneurisms on the internal capsular arteries, in which case an overfilling by vis a tergo or vis a fronte will produce the result. No matter how

high the pressure may be, if the capillaries are able to deliver into the veins during diastole as much blood as they receive during systole the danger of rupture is minimized, although we must not forget that the wall of a miliary aneurism may be so thinned as to give way without increase of pressure. I wish also to point out that the increased tension which brings about rupture is not necessarily due to increased force of systole. It is probably just as often due to interference with the venous flow. Leaning over to pick up a paper which had fallen to the floor in one case constricted the veins of the neck, dammed back the blood upon the capillary field, over-filled the arteries, and rupture resulted. In another case pulling on a boot producted the necessary venous constriction. The effect of active hyperaemia is illustrated by the case of a lawyer who was stricken while delivering an address one afternoon, not very long after dinner. Here we have the combined effect of increased tension due to splanchnic congestion and the active hyperaemia induced by mental effort, as a consequence of which conditions the cerebral arteries contained more blood than the capillaries were able to drain off with sufficient rapidity.

It will thus be seen that the capillaries, apparently, hold the key to the situation and that we should endeavor to find some way to keep these sluice gates open.

Reverting to the statement that not high pressure per se, but the conditions of the small arteries is the most important factor in determining the danger of apoplexy it is pertinent to ask if we have any means of determining to what extent the cerebral arteries may be diseased. I know of no way to ascertain this except by the premonitory symptoms. Even though the pressure is not excessive, attacks of vertigo, numbness and tingling in the hands, transient aphasia or paralysis are indications of loss of balance between filling and emptying of the capillary area and hence of the existence of conditions associated with rupture, but it must

be remembered that one may have vertigo or numbness for years before an apoplectic accident occurs. A study of the eye-ground may be helpful, tortuous retinal vessels suggesting the probability of diseased capsular vessels.

Cardiac localization may give rise to the angina pectoris complex. The symptoms vary from a slight sensation of substernal constriction to the severe manifestations of a typical anginal attack. While I speak of localization in the cardiac vessels producing these anginal symptoms I do not wish to be understood as committing myself to the coronary theory of angina pectoris. Although anginal symptoms often are associated with constriction of the coronary artery they are sometimes observed when no such constriction can be demonstrated post mortem and frequently absent when such a condition exists. The theory of arterial spasm is often brought into requisition here as in the case of the cerebral arteries, but it is only an assumption and is not susceptible of proof. A full discussion of the angina problem would not be in place at this time, but it may be worth while pointing out that while anginal symptoms are seen in association with arteriosclerosis it is a mistake to assume that hypertension is an essential accompaniment.

Localization of the arteriosclerotic process in the kidneys gives rise to chronic renal degeneration which occasions the symptom complex of chronic interstitial nephritis. A discussion of this subject at present would carry me too far afield. It is mentioned here because this result of arterial damage is one of the important life-terminating mechanisms of arteriosclerosis. Death results most often from myocardial change, next in frequency is renal insufficiency, lastly cerebral accidents. The localization in the gastric and splanchnic circulations are of less consequence from the point of view of life and death, but may occasion no little discomfort because of functional disturbances.

Rational methods of prevention and treat-

ment can be applied only when we have acquired a clear and definite knowledge of the cause and of the pathology. Our knowledge of the pathology while not to be considered final is fairly definite, but we are still groping for the cause or causes, and for the method of action. It is impossible, therefore, to discuss this phase of the subject dogmatically, although I believe that something may be accomplished if a case comes under observation sufficiently early. In the first place the situation should be explained very clearly and the patient's cooperation secured, through understanding, not through fear. A thorough search should be made for foci of infection which must be removed, if found. Syphilis, in my opinion, is not the important factor so commonly believed; at any rate the administration of the iodides and other antisypilitic remedies is disappointing. A careful analysis of the patient's mode of life and habits is the next step, but we must be careful to avoid laying undue weight upon hypothetical factors. Those things which increase the force of the heart action are sought for, especially mental excitement and worry. The man who approaches every difficulty with a smile and who doesn't lie awake at night fearing the outcome of some speculative venture; who performs his daily task quietly and methodically, and who shows no feverish anxiety that the day will not be long enough to accomplish what he has planned; who eats slowly with diverted mind, and only sufficiently for his physical needs; this man is not likely to suffer from excessive vascular tension. Mental quiet, physical rest, and moderate eating summarize the essentials. It is usually impossible for a man of affairs to actually rest every day, but relaxation is rest and some diverting employment, whether golf, or gardening, or the movies, should interrupt his routine frequently. If the tension is very high it may be necessary to insist upon complete rest for a time, but we meet with cases in which complete rest in bed has no effect. The amount that is eaten is more

important than the kind of food partaken. It is difficult to get away from the fear of proteins, and many of us still hold the old superstition about red meats. A study of the protein retention may help us to determine how much of this class of food may be allowed. In the obese it is important to restrict the diet with the view of reducing the weight. Condiments, I believe, are apt to be injurious. These articles can reflexly increase tension, and should, therefore, be avoided. Likewise caffeine in the form of coffee when taken, as it often is in excess, may over stimulate. Efforts to reduce blood pressure by the reduction of the fluid intake are of no avail and conversely the free ingestion of liquids does not cause an increased tension. Medication is of no avail at this stage. When organic changes have taken place, and I believe that every case with a systolic reading of 200 and over is associated with inflammatory changes in the arterioles, the same general line of procedure is to be followed, but the prospect of improvement is almost nil; even so, much might be accomplished in the way of rendering the progress less rapid. The first thing to be done in these cases is to remove from the patient's mind the idea that reduction of systolic pressure is the primary aim of treatment and that a pressure of 200 and over is necessarily something to be constantly alarmed about. Patients are often better with a high pressure, especially if the systolic pressure falls without a corresponding fall in the diastolic pressure. Mosenthal, however, in a recent article, seems to dissent from this view. In sclerotic cases I find it extremely difficult to reduce the diastolic pressure, and its persistence means that the peripheral resistance is still present, the removal of which is of course the desideratum of treatment. Where there are no symptoms and the heart shows no signs of giving way and the kidneys are functioning well general hygienic management is all that is required. The presence of symptoms and the state of the heart are more important guides than the height of the mercury.

Nitroglycerin and the iodides have been, and still are, largely employed. Neither is indicated on account of hypertension alone, and the iodides are apt to be positively injurious in cases with hyperacting thyroids. If there are symptoms, especially headache and possibly vertigo, the iodides are not infrequently beneficial in giving relief, but I have never seen them reduce tension. It may be pointed out here that blood pressure, exhibits quite a considerable range of variation and if readings are not taken very often a misinterpretation of results might easily be made. If the heart begins to show signs of weakening digitalis in some form is indicated regardless of the pressure. Vertigo, too, is frequently benefitted by digitalis; in my experience, more often than by nitroglycerin.

DISCUSSION

DR. J. H. CANNON, (Charleston):

I would like to emphasize some of the points Dr. Wilson has mentioned. I think it is generally conceded that foci of infection are to be considered in cardiovascular disease. A very excellent paper was written by Emerson on that subject last year.

One point Doctor Wilson did not stress except in a general way was that which was stressed recently by Allen of the Psychiatric Institute—that simply by restricting the sodium chloride in the diet, and of course attention to the foci of infection, he was able to secure good results.

THE SIGNIFICANCE OF BLADDER SYMPTOMS

By Milton Weinberg, M. D. Sumter, S. C.

I am taking as a basis of a bladder disorder the following symptoms: painful and frequent urination, pyuria, sometimes hematuria, and suprapubic pain of a bearing down nature or pain in the perineum and rectum. The diagnosis of cystitis is many times erroneously made on the above symptoms. Even the three cardinal symptoms of a cystitis, namely: painful and frequent

urination and pyuria are not sufficient evidence to arrive at such a diagnosis. These symptoms may exist and do frequently occur in renal infections without an accompanying involvement of the bladder itself. Prostatic infections and those of the posterior urethra and seminal vesicles may cause the same symptoms.

Cystitis denotes an inflammatory change in the bladder, either generalized or in localized areas. This change is usually in the bladder mucosa, but may involve the submucosa or even the muscular wall. Therefore, we are not justified in speaking of a cystitis unless such change has taken place.

I will here take courage to propose a new word which will be intended to cover any bladder disfunction, whether or not there is a pathological change in the organ itself. I think that the term "cystitis" should be reserved entirely for those cases with known inflammatory lesion of the bladder. The term that I propose is "Cystopathy", which would cover all bladder disturbances, regardless of the underlying cause and whether or not there is a pathological change in the bladder.

There is a form of cystitis which may exist without the finding of pus in the urine. This is seen in the Hunner or submucous ulcer, which frequently produces an intractable form of bladder irritability. Chronic disease of the prostate, seminal vesicles, posterior urethra, urethral caruncle, polyp, cystcele, pelvic tumors, and urethrocele frequently cause marked bladder irritability and there may or may not be a co-existing cystitis. Hyperemia of the trigone without bladder inflammation is a very common cause of bladder disturbance.

I will now briefly cite a few cases to explain some of the problems that are met with in cases presenting symptoms of bladder disturbance.

Case 1. White woman, age 46, married, complained of frequent and painful urination for more than a year. Examination of specimen showed many pus cells and colon

bacillus present. Further examination with the cystoscope and ureteral catheter and X-Ray showed the following: bladder inflamed, very many pus cells in specimen from left kidney, an X-Ray showed a branching stone in pelvis of kidney. Evidently, the bladder condition is secondary to the renal infection.

Case 2. White girl, single, age 19, complained of frequent urination and some pain in region of appendix, sufficient pain for large doses of morphia. Specimen of urine showed few pus cells. Bladder without any visible lesion. Ureteral catheterization and pyelogram demonstrated the presence of ureteral stricture. Dilatation of the ureter twice entirely relieved the patient and saved her from appendectomy.

Case 3. White woman, married, age 65, complained of frequent and painful urination; history of hematuria about five years previous. Bladder urine showed very many pus cells, some red blood cells, and the colon bacillus. Cystoscopy revealed carcinoma of the bladder.

Case 4. White man, age 71, complained of frequent, painful and difficult urination for two years. History of hematuria eight years previous. Bladder specimen of urine showed many red blood cells and many pus cells. Cystoscopy revealed several small calculi in the bladder and an extensive infiltrating carcinoma of the bladder, involving the trigone and vesical neck.

Case 5. White woman, married, mother of nine children, complained of frequent and painful urination and blood in the urine. Bladder specimen showed much free blood, and very many pus cells. Cystoscopy showed a diffuse marked cystitis throughout the bladder wall. Catheterization of ureters negative. The specimen of urine from the bladder revealed very many gonococci.

Case 6. Married man, white, age 44, complained of frequent and painful urination. Urine very turbid and shows many pus cells. He has had this condition off and on for the past several years. At times, he has

been having a little rise of temperature. There is no urethral discharge. Prostate very much enlarged, tender on palpation, adherent, somewhat nodular. Massage of the prostate brought out a great deal of purulent matter. Patient had two infected teeth. Cystoscopy showed normal bladder, but a hyperemic trigone, and specimens from the kidneys were entirely negative. Relieved after treatment of the underlying cause.

Case 7. Married man, white, age 32, complained of frequent and painful urination of such a nature that he is unable to work. Denied venereal disease and there was no urethral discharge. Urine very turbid from pus. Prostate very much enlarged, very tender on palpation, infiltrated, adherent, boggy in places. Massage brought out a great deal of yellow, thick purulent material. *Gonococcus* was present.

Case 8. Negro woman, age 40, married, complained of very frequent and painful urination for the past nine months. Has noticed blood at times in urine. Cystoscopy showed a generalized cystitis with tubercles in the bladder mucosa. Right ureter catheterized and great deal of pus obtained from right kidney in which was found the tubercle bacillus.

Case 9. White woman, age 48, married, complained of distressing bladder symptoms for about two years at intervals. Cystoscopy showed two superficial ulcers which yielded to high-frequency cauterization.

Case 10. White woman, age 20, married, and three months pregnant, complained of frequent and painful urination. No other symptoms. Urine showed much pus and colon bacilli. Cystoscopy and ureteral catheterization revealed pyelitis of pregnancy. Bladder condition, of course, is secondary to this. Renal lavage through ureteral catheter relieved the patient.

Case 11. White man, married, age 39, complained of usual bladder symptoms. This had been occurring remittently for several years and symptoms were very

severe. Cystoscopy showed three punched out ulcers of bladder mucosa and sub-mucosa, typically syphilitic. History of syphilis at 19. Wassermann—four plus. Antisyphilitic treatment cured the bladder lesions.

Case 12. White man, widower, age 59, complained of frequent urination and straining. Twenty times during night. Argyl Robertson pupils. Knee-jerks absent. Prostate normal per rectum. Residual urine 300 cc. Cystoscopy, no inflammatory change in bladder. Marked trabeculations. Striking relaxation of vesical orifice and cystoscope could be withdrawn into the posterior urethra without discomfort, there being not the slightest resistance from the vesical sphincter. Only the external sphincter had any tonicity. The relaxation at the vesical orifice in these cases of spinal cord disease is in marked contrast to the contracting ones of prostatic hypertrophy. The diagnosis in this case is vesical retention due to syphilis of the spinal cord, tabes dorsalis. Blood Wassermann was two plus and spinal Wassermann very strongly positive. Spinal cell count very low, showing a degenerative change in the cord rather than syphilitic inflammation.

I believe that the above cases clearly show that symptoms of bladder disease demand thorough investigation to ascertain their significance. Good results can only be obtained by treating the underlying cause. Modern urological methods are necessary adjuncts in the diagnosis and treatment of urinary disturbances. The cystoscope and ureteral catheterization are most frequently invaluable aids.

In women, 80 per cent of renal infections present bladder symptoms, and often, these are the first and only symptoms present. The absence of pain in the kidney region or along the course of the ureter or the absence of a rise of temperature by no means excludes renal infection.

I would announce the following dicta: 1. primary cystitis rarely exists. There-

fore, it is secondary to a lesion elsewhere in the tract, or body or such conditions in the bladder itself as stone, diverticulum, tumor, etc. 2. bladder symptoms frequently occur without inflammation of this viscus.

In conclusion, I will reiterate that it is important to be accurate in the use of the term "cystitis" and it should be used only in those cases where such conditions is known to exist. The word "cystopathy" would very nicely denote a bladder disturbance from any cause whatever.

DR. G. T. TYLER, (Greenville):

This is a very interesting paper of Doctor Weinberg's and shows a high grade of work and thorough investigation of the urinary tract. The twelve cases he has recited also give expression to a wide range of conditions which give bladder manifestations. He could not have mentioned all the conditions which produce bladder disturbances, and I want to add a few more of these conditions. These are not all new, of course, and I am sure you can duplicate some of these instances which I mention. Aside from the urinary tract especially, I want to call your attention to some of the extra urinary tract causes of bladder manifestations, such as cancer of the kidney, of the cervix and of the rectum, bladder and urethra, hemorrhoids, fissure, ulcer of the rectum; stricture of the rectum; relaxed pelvic floor; mal-position of the uterus; foreign bodies; abdominal and pelvic tumors; injuries that involve the brain and spinal cord, and other conditions such as multiple sclerosis; incontinence of the bladder from muscular weakness, especially those cases that Doctor Kelly has operated so successfully in elderly women; disease of the skeleton, subluxation of the sacroiliac joint; fistulae communicating with the bladder through the bowel; peri-ischiatic abscess; congenital anomalies; post operative bladder symptoms, and parasitic conditions such as Bilharziasis, filaria sanguinis hominis; orthostatic albuminuria, and then the constitutional conditions which give rise and are often first recognized by bladder manifestations, such as diabetes insipidus, nephritis, irritability of the bladder from the highly acid urine in gout; puerperal jaundice, leukemia and malaria.

Anybody could give a list even longer than that of the constitutional conditions

and others that give manifestations of bladder symptoms. I would like for us to regard the bladder as a very important signal station, so that our investigations of bladder symptoms be not confined to the urinary tract alone.

I would cite one interesting case which was sent to me with a diagnosis of acute pelvic inflammation and possibly acute appendicitis. The patient had hematuria. After thorough investigation no cause could be assigned. Then the patient admitted having been on a drinking bout for some time, and this hematuria cleared up in five or six days.

An neurologist told me that it was his experience that very often after free indulgence in alcoholic drinks this hematuria was present.

As to the use of the word "cystopath", I agree cordially that this is a better word.

DR. W. P. CORNELL (Columbia):

In the last six weeks a child was referred to me, a child two years and nine months old, with a history of having suffered from colitis for some time, ten or fifteen stools daily, with intense straining, crying out and putting her hand on the lower part of the abdomen. Inquiry elicited that only occasionally had there been blood in the stools, usually green, mucoid stools. The child had lost weight to a great extent. The duration, with the intense pain suggested that the straining was not in the intestinal tract, and stones in the bladder was thought of. Dr. William Barron, advised the X-Ray, and we found a very typical shadow. Doctor Bunch operated, and here is the stone. The only symptom was the straining and diarrhea. I think the point is that whenever there is intense straining associated with diarrhea, we should think not only of the intestinal tract, but of the urinary tract, especially in the young child, as in childhood loose stools are evidence of trouble elsewhere.

DR. S. G. GLOVER (Greenville):

This paper gives me an opportunity to emphasize the importance in the female child of a catheterized specimen when you have pus cells to deal with. I want to cite a case that I was called to see a child eight years of age with frequent urinations and irregular temperature. The specimen of urine was loaded with pus cells. We put this child on alkaline treatment, but the specimen of urine was still loaded with pus cells. We switched her to acid treatment, but still the urine

remained loaded with pus cells. There was a history of tuberculosis in the family and tubercular kidneys was suspected. Consultation was asked for, an urologist saw the case, and advised cystoscopy. At first the X-Ray showed normal. The cystoscope was used, a catheterized specimen from the bladder was obtained, and looked at after the work was done. The cystoscope work was negative. Later catheterized specimens showed no pus cells at all; five days later another specimen of urine was voided, loaded with pus cells. This demonstrates that in the female child you should deal with catheterized specimens. To my mind this was simply a local vaginal condition.

DR. W. R. BARRON (Columbia):

When we find on inspection that we have bladder symptoms we feel we have a definite procedure to carry out for relief. But there is a type of case in children where it is absolutely impossible to find any pathology. They are negative in every sense of the word. They are day wetters and night wetters. They give their parents a great deal of distress and a physician is consulted for relief. If there is any explanation of why that occurs it has never been proven. Someone places it at the door of previous infection. We cannot substantiate that. But in those cases some men claim that the simple insertion of a catheter will relieve, although there is a type that this will not relieve, in which repeated instillations of argyrol will relieve, and I think it is a good thing for everyone of us who practice medicine to keep in mind that you can cure 60 to 75 per cent, by that simple procedure if you persist long enough in the treatment. In some cases you may have to persist for a month, but it is worth the time you spend.

DR. MILTON WEINBERG, (closing):

I would just like to state in closing that every person who presents for examination and treatment for bladder symptoms should be examined particularly for the underlying cause of these symptoms, the same as you do routine examination in the case of the individual who comes with symptoms of headache and dyspepsia. The bladder condition is very rarely primary, but is practically always due to some other cause, either somewhere else in the tract or somewhere else in the body, not the bladder. If it is in the bladder it is usually due to stones or diverticulum or something of that sort.

THE PHARMACOLOGY OF CERTAIN ENDOCRINE GLANDS.

By W. H. Zeigler, Department of Pharmacology Medical College, Charleston, S. C.

The following discussion of "The Pharmacology of Certain Endocrine Glands," is derived from a careful study of the literature on the subject, and also from experiments conducted upon living animals, by the author.

It would be almost impossible to give in detail the vast amount of work that has been done along pharmacologic lines with these substances, so that I shall confine my remarks strictly to those glands that have been recognized as having marked pharmacologic effects, i. e., the suprarenal, thyroid and the pituitary, only mentioning the preparations of the ovary and the pancreas.

1st., THE SUPRARENAL. The following preparations of the adrenal glands are available;—Epinephrine (adrenalin or suprarenin) which occurs as a very fine crystalline powder and is used in the form of the hydrochloride, usually in solutions of 1-1000 to which a preservative has been added. There is 1-60 of a grain of epinephrine Hcl, in each c. c. of the solution. This solution becomes red upon standing and loses its activity, especially if diluted. Five to ten drops can be given on the tongue diluted with the same amount of water.

2nd., SUPRARENALUM SICCUM, or dried suprarenals. This is the dried adrenal glands of cows, cleaned, freed from fats and powdered. The glands contain about .5 per cent of epinephrine. Dose, .25 grams or 4 grains.

3rd., THYROIDIDEUM SICCUM—Dried thyroid. This is the powdered glands of sheep and other animals. One part of the dried gland corresponds to about five parts of the fresh gland. The U. S. P. requires .17 to .23 per cent of thyroid iodine. Dose 1-1-2 grains.

4th. THYROXIN—This is Kendall's active principle of the thyroid gland for oral administration. Tablets of .2, .4, .8 and 2 milligrams, are available.

5th. HYPOPHYSIS SICCA—This is the dried and powdered posterior lobe of the pituitary body of the ox. Dose 1-2 grain.

6th. LIQUID HYPOPHYSIS—or pituitary solution, (pituitrin), also marketed in 1 c. c. ampoules as pituitrin surgical and obstetrical—the surgical is twice the strength of the obstetrical. Dose 1 c. c. of the obstetrical.

7th. TABLETS OF THE WHOLE GLAND—One grain. Tablets the anterior lobe, 2 grains.

DISCUSSION

The Suprarenal.

Oliver and Schaefer in 1895 were the first to demonstrate that the medullary portion of the adrenal gland contained a principle that when injected into the circulation produced a most remarkable effect upon blood pressure. This principle was isolated by Able and Takamine in 1901, and was found to be a simple amin derivative of catechol, having alkaloidal properties. It can be prepared synthetically.

Pharmacologists have been able to locate the site of action which is due to a stimulation of the endings of the entire sympathetic system. In man when injected subcutaneously in doses of 1-100 to 1-40 of a grain, the blood pressure response consist of a rise of about 12 m. m. of Hg. Intramuscular injections produce a higher rise which persist for a longer period. When administered by stomach epinephrine fails to produce its characteristic effect. The whole gland however, administered by mouth seems to be effective, although there is no typical adrenalin rise in pressure. The writer knows of one case of low pressure in a young man who was benefitted by this method. The most remarkable effects are obtained by intravenous injection. When injected into the femoral vein of a healthy dog, 1-20 c. c. per Kg. of a 1-1000 solution

the blood-pressure rises rapidly, as it reaches its maximum the heartbeats are greatly slowed and strengthened. As a rule there are two rises or a double peak, as seen by the record. The first rise is due to the peripheral vasoconstriction, the first fall to a relaxation of this constriction, the second rise has been contributed to stimulation of the vasomotor center, the final fall is due to impurities.

While the vasoconstriction effect is the most important, the cardiac stimulation is also important. Epinephrine stimulates both cardiac accelerator and the inhibitory mechanism.

Excessive doses may cause an acute dilation of the heart. In a number of experiments upon dogs with therapeutic doses, I have had death to occur from a single injection. The rapid destruction of the principle has been the subject of much discussion and many experiments. The theory generally accepted is that it is due to oxidation. While the effect of a single injection is more or less fleeting, the effect can however, be maintained uniformly if the injections be made continuously at a slow rate.

I have found that when sodium arsenate is injected intravenously into an animal and followed by epinephrine that the pressure not only rises higher but persists for a longer time. This is interesting in view of the fact that arsenic paralyzes the small blood vessels and lowers bloodpressure. I believe that it may be due to several factors. 1st., the lessening of oxidation, an inhibiting effect upon the thyroid or perhaps due to the fact that in low pressure or in relaxed condition of the vessels epinephrine is more effective.

Sajous over twenty years ago advanced the theory that certain ductless glands were the organs through which nature sustained life and defended it and also that many remedies used daily by the practitioners produced their effects through the intermediary of these organs. Experiments have proven that both strychnine and digitalis increase the out-put, while morphine less-

sens it. Undoubtedly caffeine and nicotine has the same effect. This may be an explanation of the high pressure seen in old age; especially among those who have used these drugs in excess. In 1903 Josue described sclerotic lesions of the aorta in rabbits to which adrenalin had been administered intravenously for long periods. Experiments tell us that the tobacco users bloodpressure is kept up several m. m. or Hg.

To sum up I believe we have been able to add epinephrine to those drugs which are used in therapeutics on a scientific basis—we know the site of action. In therapeutics:

1st. It is useful in the form of its solution as a local application to cause shrinkage of mucous membrane.

2nd. To arrest a small hemorrhage.

3rd. To prolong local anesthesia.

4th. By hypodermic injections for bronchial asthma.

5th. By intravenous or rectal injection as a rapidly acting circulatory stimulant.

DISCUSSION

Thyroid.

The thyroid gland differs from the other glands by not being injured by digestion, so that it is administered in tablet or capsule solely by this method.

We are indebted to Kendall, who in 1915, isolated the active principle of this gland. He named it "Thyroxin." It contains about 65 per cent iodine, and can be obtained in tablets weighing from .2 mg. to 2 mg. A tablet is given on an empty stomach with a glass of water in which 20 grains of bicarbonate of soda is dissolved. The soda is said to aid in the absorption. The effect of subcutaneous injection of thyroxin is described by Kendall in Jour. Endocrinology April-June 1919 p. 155, who says, "There is at first no effect either on pulse rate or blood pressure, but after twenty-four to thirty-six hours the animals appear restless, there is a decided increase on pulse rate and if several injections are give on

successive days, these symptoms are all aggravated." He found that thyroxin administered over a long period in daily doses caused death while single large doses were not toxic. His conclusions were that thyroxin itself is not toxic but toxic effects are caused by changes of this substance in the body when a dose is repeated and the thyroxin itself cannot be utilized. In other words the long continued presence of it in the tissue and blood stream was harmful and would produce the symptoms of hyperthyroidism.

Plummer found that the physiologic effects of a single dose of thyroxin delayed in man, but the effect exceedingly long. It took on an average of ten days for the first effect to appear and three weeks to disappear. Hunt and Seidell have shown that there is a parallism between the iodine content of the thyroid and its physiologic activity. Injecting 50 mg. of KI into dogs, Marine and Rogoff found the fixation of the iodine complete in five minutes. The conclusions of many investigators have been that the indication of the activity of the gland is the percentage of iodine. The normal physiologic processes seem to depend upon the ability of this gland to absorb and fix the iodine circulating in the blood. In old age the gland contains less of it, and in hyperthyroidism small doses of iodine will aggravate the symptoms. Is it possible that the function of the gland is simply concerned with the metabolism of iodine, just as the function of the parathyroids seem to be the metabolism of calcium, working then on the theory that if the function of the thyroid is to use the iodine of the blood and the tissue, that the iodine would perhaps influence the activity of epinephrine. I have concluded recently several experiments upon dogs in which I injected intravenously in measured amounts, an aqueous solution of iodine, followed by the intravenous injection of 1-20 c. c. per Kg. of a 1-1000 solution of epinephrine. One would suppose that since epinephrine has alkaloidal properties, being precipitated by

iodines, that the action on the circulation would be prevented.

The results of the experiments were that epinephrine after iodine produces not only a higher pressure but a more lasting one. The iodides or iodine has no effect on normal bloodpressure, but with high arterial tension they have a tendency to lower it. Bastedo says that this effect is probably due both to the lessening of the viscosity of the blood and to the increase in thyroid activity. I believe that it is due to thyroid activity, and that the amount of epinephrine in the blood stream depends upon the ability of the thyroid to absorb and fix iodine from the blood, which it uses to manufacture the principle.

Another theory is that the iodine increases the excitability of the sympathetic nerves, so that they respond to the stimulating effect of the epinephrine more readily. If the gland loses its power to absorb iodine found in the blood, then the epinephrine has full sway and high pressure is the result.

Downman in a recent issue of the Jour. A. M. A. reports a case of unexpected reaction following infiltration with procaine-epinephrine solution as a local anesthetic. The diagnosis was tumor of the cerebellum. Before the infiltration was begun the systolic blood pressure was 102, pulse 80. At the completion of the infiltration, the systolic blood pressure rose suddenly to 180, and the pulse to 150 a minute. There was loss of consciousness followed by convulsions. The thyroid gland appeared increased in size. Fifteen minutes after the reaction, the blood pressure began to fall and come down within a few minutes to 115. Undoubtedly this reaction was due to a pathologic thyroid.

Hunt and Seidell have demonstrated that thyroid administered to rats and mice lowers their resistance to morphine and markedly increased their resistance to acetone-trile, the toxic effects which are due to the liberation of Hcn. I have observed that when morphine is used with ether as an

anesthetic epinephrine is not as active, the pressure does not rise as high nor does it last as long. Undoubtedly Sajous is correct in his statement that in addition to their familiar pharmacological effects a great many drugs influence the activity of the ductless glands.

The therapeutics consist of:

1st. Successful administration in myxedema and cretinism.

2nd. After thyroidectomy.

3rd. In hypothyroidism.

4th. In rickets and delayed union of fractures.

PITUITARY EXTRACTS

The nature of the active constituents of the pituitary gland is unknown, although an active principle termed "Tethelin" has been reported as the growth producing element of the anterior lobe.

The posterior lobe in the form of the dried and powdered gland and the solution is used extensively in medicine.

The most marked effect of intravenous injections of the extract is a rise in blood pressure. The rise is not as high as that of epinephrine but is more lasting. This effect is due to a stimulation of the arterial muscle leading to a rather persistent vasoconstriction. Unlike epinephrine repeated doses become less and less effective and may finally lower the pressure. It resembles epinephrine in being ineffective when administered by mouth.

Osborne in his book of the "Principles of Therapeutics" claims however, that the whole gland is effective in pituitary headaches and in menorrhagia.

Hypodermic injections of 1 c. c. of the solution produces a marked effect upon the uterus causing it to contract. The intestinal muscles are also stimulated and peristalsis increased.

This stimulating effect upon smooth muscle does not seem to extend into the renal vessels, so that diuresis takes place, this effect being due largely to the increase in pressure.

Finally to sum up the therapeutic indications for its use:

1st. The liquid Hypophysis, by hypodermic administration in doses of 1 c. c.—useful in obstetrics and after abdominal operations when normal peristalsis is not present.

2nd. In cardiac failure and shock.

3rd. Although the administration of the powdered whole gland and the anterior lobe have been used with some success in rickets, some cases of epilepsy, and certain vasomotor disturbances, this preparation of the gland is still on trial.

Other glandular preparations considered by some clinicians as being useful but not generally accepted are:

Dessicated Corpus Luteum and Lutein.

The fresh substance from the corpora lutea from cow's ovaries dried and powdered. Dose 2 to 5 grains twice daily, in capsule, powder or tablet.

Ovarian substance. The entire fresh ovaries of the hog,—cleaned, dried and powdered. Dose 1 to 3 grains t. i. d. In tablets of 2 grains.

The intravenous injections into animals of ovarian extracts lower blood-pressure. Their use is therefore contraindicated in low pressure.

The indications for the use of these preparations are delayed menstruation and for the relief of the symptoms which follow the natural or artificial menopause.

In conclusion the writer would like to mention the preparation of the Islands of Langerhans recently perfected by Banting and Best of the University of Toronto, which has been proven of great value in diabetes mellitus, being acknowledged as a specific in diabetic coma.

The originators used the extracts of fetal calf pancreas in neutral saline solutions. This extract was prepared by a special process, from the pancreas of the bovine fetus at about the fifth month. They found that when this extract was injected intravenously or subcutaneously depancreatized dogs, it markedly reduced the percentage of blood

sugar and the daily urinary excretion of sugar.

Later on however, J. B. Collip of the department of pathology and chemistry isolated the active principle and an extract was prepared suitable for human beings from the full-grown ox, by the aid of alcohol. This extract is known under the trade name of "Insulin" or "Illutin", and is being manufactured by Eli Lilly and Company, who have been designated by the University of Toronto, as the only one who can manufacture the product. In each city a physician and pharmacist is also named by whom the drug can only be procured.

Unfortunately an accurate dosage has not been determined and it is important to remember that it is not without its toxicity. Large doses will cause a hyperexcitability followed by coma. The effects are said to resemble strychnine poisoning. The treatment is, to keep the patient quiet, and give injections of glucose or 5 to 25 Gm. by mouth with orange or lemon juice. When unconscious 1 c. c. of 1-1000 solution of epinephrine Hcl followed by glucose by injection.

The originators advise a moderate dose to begin with gradually increased until the desired effects are obtained.

SOCIETY REPORTS

EDGEFIELD SOCIETY REORGANIZED

The doctors of Edgefield County were called together at Edgefield on August 17th. for the purpose of reorganizing the County Medical Society. The following officers were elected: A. R. Nickolson of Edgefield, President; J. N. Crafton, of Colliers, Vice President; and Thos. K. Fairey, of Johnston, Secretary and Treasurer.

It was decided that we adopt the constitution and by-laws of the old organization, and have semi-annual meetings. One meeting being held at Edgefield and one at Johnston,

the doctors of each town entertaining the visitors. The dates for the meetings are the first monday in April and October.

The society was reorganized with a determination of making it a success. Dr. Marsh made a motion that the President appoint at each meeting two members to read papers at the next meeting. The motion was carried and Drs. R. A. Marsh and Thos. K. Fairey were appointed for the October meeting.

There being no further business the society was adjourned.

Thos. K. Fairey, Sec. & Treas.

PUBLIC HEALTH

LEON BANOV, M. D.,
Health Officer, Charleston County,
Charleston, S. C.

A FEW MALARIA FIGURES

In view of the fact that South Carolina has always been considered a malaria ridden State, it is somewhat cheering to learn that only a trifle over one-half of our population 53 per cent to be exact is exposed to an excessive amount of malaria fever, while 47 per cent live in sections where the death rate from this disease is less than 1 per cent, 10,000 population.

The above figures are taken from a recent study of mortality reports made by Dr. Kenneth F. Maxcy of the United States Public Health Service, who points out in a paper published in the U. S. P. H. S. Weekly Reports that while the case fatality rate from malaria is very low about 0.5 per cent it is fairly constant; and a very fair idea as to the incidence of this disease may be obtained from a study of the mortality reports.

These mortality figures agree quite accurately with the topography which is known to be favorable to anopheline production, and hence to malaria prevalence, and may therefore be taken as a very fair index to the prevalence of malaria.

During the 3 year period 1919-1921, South Carolina as a State ranked seventh among the malarial States, higher death rates having been reported in Arkansas, Mississippi, Missouri, Florida, Louisiana and Georgia. The malarial death rates in these States vary from 4.8 deaths per 100,000 population in Arkansas to 2.6 per 100,000 population in South Carolina. With the exception of Arkansas, these States

show a steady decline in their malarial death rate.

We find by comparative study of the mortality rates that we can definitely trace the incidence of malaria, and we find that the disease is largely confined to the Coastal Plain, reaching its widest distribution in the lower Mississippi valley.

A very important point borne out by the figures is the fact that the distribution of the disease is not uniform but focal in character. Areas of high prevalence are found chiefly about the mouth of large rivers along the coast, particularly in the "Delta" lands of the Mississippi and along the valleys of its large tributaries.

While in Arkansas, Louisiana, Mississippi and Florida a large portion of the total land area and population is affected by malaria, in the other southern States the problem is more or less limited to certain sections of each State, the remainder of the State being relatively or entirely free from the disease.

A study of the malaria mortality figures from South Carolina by Counties shows a varying death rate ranging from 7.7 per 10,000 population in Horry County and 6.5 in Georgetown down to less than 1 death per 10,000 in Greenville and Pickens Counties.

A careful consideration of the malarial foci in South Carolina should materially alter the opinions of a great many folks who look upon our State as a malarial hot bed without recognizing the fact that a considerable proportion of our population—almost one-half—live under comparatively malaria-free conditions.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

SURGICAL CONSIDERATIONS OF SPLENECTOMY

"W. J. Mayo. Annals of Surgery."

The safety of splenectomy depends on the careful separation of the splenic attachments, and its delivery without injury to its vascular pedicle.

Perhaps the best incision is one made on the left side of the upper abdomen, analogous to the Bevan incision for Gall Bladder work on the right.

In most cases of splenomegaly adhesions of a varying vascularity are present, usually to the parietal peritoncum, and from the upper pole to the diaphragm. The upper ones frequently are very vascular and bleed profusely in the inexperienced hands. Separate these with the fingers close to the spleen, clamp, divide and ligate vessels when possible, and use large hemostatic packs or wet tapes to control generalized oozing.

Owing to the close association of the capsule to the splenic tissue itself, it is never possible to do a strict subcapsular splenectomy.

Attempt to deliver, first the lower pole, and later the upper, being always careful not to exert too much pull on the pedicle itself.

Splenic Ligaments, requiring especial care are first the gastro splenic, and second, the occasional deeply vascular ligamental attachments to the crux of the diaphragm, and thirdly the attachment between the under surface of the lower pole to the splenic flexure of the colon. The lineorenal ligament rarely ever has any decided vessels.

In all cases of splenomegaly, carefully in-

spect the under surface of the spleen, close to hilum, for attachment of the tail of the pancreas. This is easily found and as easily separated and pushed away, after necessary hemostasis. The tail of the pancreas itself has been included in the ligature by Mayo without untoward convalescent effect.

The stomach itself is often attached by vascular adhesions the under surface of the spleen, but this too, upon proper search is easily found, separated and pushed away.

Next to adhesion, vascularity, and liability of hemorrhage from inaccurate hemostasis, the greatest danger in splenectomy lies in the improper handling of the pedicle.

To rupture its vessels, or to pull the spleen away from its pedicle, before the latter is properly caught, makes fatal hemorrhage a serious possibility. These vessels should be ligated separately and collectively, and the three forceps technique should here be used whenever possible.

Experimental ligation of the splenic artery produces atrophy and not necrosis.

Every attempt should be made to sufficiently control oozing, as to permit of primary wound closure without drain, but when oozing persists it must be controlled by tampon.

As regards operative mortality, it is almost negligible when the spleen is small, or when it is much larger, but free from adhesions and thus freely movable. However, if it is large and adherent, and if there be ascitis, temperature, edema of the lower extremities, myocardial, renal degenerative changes the mortality will be necessarily high.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

PYELOGRAPHY

Problems in the diagnosis of lesions of the right upper and lower abdomen are quite familiar to all. Difficulty in differentiating diseases of the appendix, gall-bladder, kidney and ureter arises very frequently. Many patients have undergone exploratory operations of the abdomen without anything having been found to relieve them of their suffering. Since the introduction of pyelography some of these difficulties in diagnosis have been eliminated; the general surgeon and the genito-urinary surgeon have a diagnostic procedure in pyelography which will often save them from making very serious mistakes.

Statistics show that for many years up until a few years ago, and even at the present time with those who do not avail themselves of modern urological methods, 25 per cent to 30 per cent of all patients who are found to have a kidney or ureteral lesion, have previously had an appendectomy without relief. The employment of pyelograms has improved this most undesirable situation.

In 1904, Klose injected a suspension of bismuth into the renal pelvis to obtain its outline with the Roentgen ray. The use of this preparation did not last long as some of the bismuth would be deposited and produce untoward effects. It was not until 1906 when Voelcker and Lichtenberg began to use colloidal silver preparation—5 per cent collargol—that interest was again aroused in making pyelograms. In 1910,

Braasch, of the Mayo Clinic took the lead and carry on in this country; and today there has been developed to a very satisfactory state this armanentarium in diagnosis which is invaluable. The colloidal silver preparations had some serious objections

In 1914, the first highly satisfactory media for pyelograms was introduced by Burns; this is thorium nitrate solution, which has a high atomic weight. This is now being used by many urologists. However, a few years later, Cameron showed that iodides could be used for pyelography. Following his work, Weld developed the use of sodium bromide solution for that purpose. Sodium bromide has the advantage over thorium in that it is much less expensive and can be prepared very easily.

Some of the lesions which may be easily demonstrated by pyelograms are: tumors of the kidney—previous to the use of pyelograms it was necessary for the tumor to attain such a size that it could be palpated before a diagnosis could be made; anomalies of the kidney and ureter—these conditions are now found to be not infrequent and their presence is very important to know in doing renal surgery; tuberculosis of the kidney; hydronephrosis; calculi in some cases; stricture of the ureter; mobility of the kidney; ectopic kidney, etc.

It may be stated that pyelograms should be done on practically all patients with indefinite abdominal symptoms; and on those which symptoms referable to the upper urinary tract when the differential diagnosis is not quite evident.

PEDIATRICS

WM. P. CORNELL, M. D., Columbia, S. C.

Is the Pediatric Seminar, held at Saluda, N. C. for the past three summers, a success and what will its future be? It is a success, and its future field of service will, in the next two or three years, include the entire South. This assertion is based upon the following: Every State south of the Ohio and east of the Mississippi rivers with the exception of West Virginia and Maryland were represented in the student body of thirty-eight doctors, and in addition Louisiana and Texas were represented. The Professors of Pediatrics in eight of the southern universities were represented on the teaching staff of thirty, all of whom paid their own expenses to and from the Seminar. The purpose of the Seminar is purely altruistic and to help the general practitioners of the South, who so desire, to become abreast of the developments in Pediatrics each year. Such funds as come in from the nominal tuition fees, after being used to defray the incidental expenses of the Seminar, will be used to better the Seminar in equipment and clinical material.

The Student Body this year were so impressed with the value of the course that they have organized with the purpose of so advertising the Seminar that its influence may be more widely recognized and appreciated throughout the South. About one hundred subjects of special interest were taken up as follows: The lecturer gives a forty-five minute discussion of the main features of the disease. This is then followed by a fifteen minutes free questioning by the student body, and these questions lead to other thoughts which are brought out in the round table conference which lasts an hour each afternoon at which all sorts of questions are asked upon any subject of the day's topics. Informality and friendliness, such as I have never seen exhibited at a medical meeting elsewhere, prevails and the men get, in this way, the views of the best informed men of the South upon the everyday problems which confront them in their daily practice. Many of the men take their summer holiday and bring their families for the two weeks.

MINUTES

MINUTES HOUSE DELEGATES CONTINUED

The committee on Health and Public Instruction begs to submit herewith the following report:

We would like to direct the attention of of the Association to the negligence on the part of the physicians of South Carolina, in reporting contagious and infectious diseases, as required by law.

A glance at the vital statistics report for 1922 shows that 437 cases of typhoid fever were reported, with 330 deaths; thereby giving South Carolina a mortality rate for typhoid fever of 66 per cent a serious reflection on the ability of the South Carolina practitioner.

153 cases of tuberculosis were reported the same year, with 1,489 deaths 272 Cases of Malaria were reported with 242 deaths.

216 cases of pneumonia were reported with 1,722 deaths.

The above figures, while evidencing a gross negligence and lack of reporting, give rise to erroneous conclusions which may result in damaging newspaper notoriety similar to the recent unjust accusation against our State made by Dr. Armstrong of the National Health Council in a recent address.

We view with apprehension the increasing number of untrained and unlicensed practitioners of medicine, operating under various guises.

We feel that the general practitioner of the State is largely responsible for the growth of these cults, by his failure to properly inform his community regarding these faddists who exploit their systems to an unenlightened community.

We would respectfully suggest, in order to offset the misleading propaganda of these illegal practitioners, that a well defined educational campaign be waged in every County, by the physician; especially in the schools.

Respectfully Submitted

Leon Banov M. D., Chairman
R. G. Hamilton M. D.
Jean LaBorde M. D.

Committee

Report Committee Public Policy and Legislation

The work of the Committee on Public Policy and Legislation for the year 1922-23 centered in the fight to defeat the effort of the Chiropractors to put through a Bill similar to the one last year "To regulate the practice of Chiropractic and create a State Board of Chiropractors and define their duties and powers." At this session of the Legislature two bills were introduced simultaneously in the House by Edgar A. Brown of Barnwell and in the Senate by J. F. Williams of Aiken. Thanks again to the splendid co-operation of the physicians over the State in their response to every appeal sent out by the Committee both Bills were defeated. The leadership for the defeat of these bills devolved on Drs. Perry and Sawyer in the House and Drs. Black and Crosson in the Senate while Dr. E. H. Barnwell, a member of the Committee and former member of the House used his influence with his former associates so that to these leaders the medical profession owes a debt of gratitude. The defeat of these measures was but the beginning of our trouble as there followed closely a Bill introduced by J. S. Whaley and Dr. Olin Sawyer "To Amend the Law Relating to the Appointment of a State Board of Medical Examiners." By which amendment there shall be three additional members from the State at Large, one a licensed Osteopath, one a Chiropractor and one a Homeopath. This Bill fostered by a physician who believed this was the best way to prevent the ultimate formation of a Chiropractic board (for our majority in defeat of the Chiropractic bill has grown less with each year) placed the Committee in the position of being unable to fight the measure lest the medical profession lay itself liable to the claim of our opponents that all we wanted was to completely crush out all cults from practice. The Bill received a favorable report from the Committee on Medical Affairs and was passed to second reading when the Chiropractor supporters so changed the bill in its operation that its

authors had to fight vigorously for its defeat. This they failed to do but by superhuman effort on the part of the Committee and our floor leaders the bill was re-committed on its third reading where it now rests, but will hold its place on the Calender at the 1924 session of the Legislature.

For the measure of success we were able to attain the past year we wish to thank all the physicians over the State responding to our call, to express our appreciation of the work of the legislative leaders and all Columbia physicians who gave their time and voice to the work. As chairman of the Committee I wish to express publically my appreciations of the work of Dr. Marion H. Wyman of Columbia, who in the absence of those members of the committee who did not live in Columbia, became my right hand man and served so faithfully and effectively wherever and whenever I need either work, encouragement or council. Your Committee is glad to report, at least, a partial victory for the medical interests of the State, but the time has come for a definite concerted action to meet the problem facing in the re-appearance of the Amendment Bill for which we urge that you give your best thought and as an Association arrive at some definite conclusion as to what and how shall be your position on this important question.

Respectfully submitted.

A. Earle Boozer, Chairman.
Committee on Public Policy and Legislation.

REPORT OF THE STATE BOARD OF
MEDICAL EXAMINERS OF S. C.
FOR THE YEAR 1922

Applicants for Examination

Doctors, June Examination	20;	
November Examination	6	Total 26
Nurses, June Examination	57;	
November Examination	57	Total 144 140
Doctors		
White, males (including 1 Osteo- path and 1 Homeopath)	-----	24
White, females (including 1 Osteopath)	-----	2

		26
Nurses		
White	-----	101
Colored	-----	13

		114 140

The Board met at Columbia, S. C. in July and December 1922 to tabulate the grades made by the applicants at the June and November Examinations, with the following results:

Doctors	
White Passed (including one Os- teopath & one Homeopath)	---- 25
White, failed	----- 1

	26
Nurses	
White, passed	----- 81
Colored, passed	----- 5
White, failed	----- 20
Colored, failed	----- 8

	114 140

The Board now reciprocates with the following States: Alabama, Georgia, Kentucky, Louisiana, Maine, Maryland, Missouri, New Hampshire, North Carolina, Pennsylvania, Virginia, West Virginia and Wyoming.
A. Earle Boozer, M. D.
Secretary.

REPORT OF FRATERNAL DELEGATES TO
THE GEORGIA STATE MEDICAL AS-
SOCIATION

Mr. President and Gentlemen of the House of Delegates:

It was our privilege and pleasure to have the honor of attending the Georgia State Medical Association last May as Fraternal Delegates from this association. We were received by our brothers in the Grand Old State of Georgia with cordiality at every turn during our stay with them. The meeting was held in the City of Columbus near the Alabama line and while we "Listened In" at their "Broadcasting" we heard many interesting papers and discussions and saw much of the things which make the Medical Association of the State of Georgia a great one and gave us an opportunity to compare our own excellent association with that of our sister state.

The Georgia State Medical Association is about twice as large as that of South Carolina being a larger state with more counties and more members. There are over fifteen hundred members in the Georgia Association. Georgia does not have an association journal but the association publishes the transactions in book form, but they find this is more costly to the members (though more members to pay for it) than if they had the

transactions published by an official journal. This fact is perhaps due to inability to put advertisements in a book whereas a journal can get advertisements from ethical drug and instrument houses and detract some of the expenses in this way. We believe by comparison that the South Carolina plan of having a Journal instead of a book of transactions is less expensive and more conducive to the upbuilding of the association interest than is the Georgia plan. In fact the Georgia Association members were talking strong for establishing of an official Journal.

The Georgia Pediatric Society has of recent years come to light as an important part of the State Medical Association and some of the pediatric papers presented at the meeting created greater interest and discussion than any of the other papers. Yet there were many good papers in all lines of medicine and surgery.

The committee on the Crawford W. Long Memorial is a very active committee in the Georgia State Medical Association and we gathered from the fact of its activity that time and right and the good people of mankind will eventually place Crawford W. Long in his right place in the Hall of Fame as the first to use ether as an anaesthetic.

They have a councillor, as we do for each district, and also a vice councillor from each county in each district.

Committee on Medical Defense and have in force a Medical Defense Practice act.

The published program of the Georgia State Medical Association does not show on a perviously selected person to open the discussions as we do in our State Association; while many of their papers had full discussion, still we feel that our plan of having at least two men who are familiar with the subject to open a discussion is a better plan.

We believe the Fraternal delegates of last year reported the method used in the Georgia Association of having the house of delegates meet two or three times during the Association Meeting rather just once as we do at the beginning of our Meeting. We strongly recommend the adoption of the Georgia plan for we believe that much more satisfactory business can be transacted in this way.

We appreciate the honor of having been appointed to represent our State Association as Fraternal delegates to the Georgia Meeting and urge any in the future who might be appointed in similar position to be sure to

accept the appointment and visit our Sister State for we know they will be more than repaid for the expense and time that might be consumed on this visit.

L. O. Mauldin, M. D.,
Greenville, S. C.
Marion H. Wyman, M. D.,
Columbia, S. C.

REPORT OF COMMITTEE ON CHILD WELFARE 1923

Your committee feels that it cannot really do justice to the wonderful work that is being accomplished in Child Welfare work in the State. Its report is based only upon the returns published in the 1922 Annual Report of the State Board of Health, from the Department of Rural Sanitation and County Health Work and from that of the Bureau of Child Hygiene.

No account is taken of the clinics and health centers situated in all of our main cities and mill districts, of which there are many doing their own good work and reaching thousands of mothers and children.

Combining the reports of the Departments of Rural Health and of the Bureau of Child Hygiene, and for the sake of brevity and just to give you an inkling of what is going on, we find that over 53000 home visits have been paid; 1868 talks to children through which over 53000 children were reached; over 11000 vaccinations against smallpox; over 31000 antityphoid inoculations; 3500 dental examinations; nearly 600 midwives instructed; over 5000 toxin-antitoxin administrations; over 300 home nursing classes with over 3200 girls attending; and over 2300 prenatal visits paid.

These are but a few of the most important accomplishments in child education and welfare, some of them having been just started, but they graphically portray what the accomplishments of the next few years will bring forth. Surely the parents of the next generation of South Carolinians will have much to be grateful for.

The plans for future extension of the Bureau of Child Welfare are broad and comprehensive. It hopes to establish its influence in every county of the State, and to win the approval and co-operation of every County Medical Society as, without this, overlapping of work and expenditure occurs, and loss of valuable time which, through co-operative administration and management would save

time and expense toward constructive effort elsewhere.

Your committee earnestly suggests, for the sake of extra stimulation of interest in Child Welfare in the State, that some plan be devised whereby complete returns, from all city and mill district clinics and health organizations may be made to the State Health Department so that complete results may be shown next, and every year in the future.

Respectively submitted,

Wm. P. Cornell, Chairman-Committee.
(To be continued)

THE REPORT OF THE COMMITTEE ON THE PREVENTION OF TUBERCULOSIS IN THE STATE OF SOUTH CAROLINA

By the Committee appointed by the President of the South Carolina Medical Association to the House of Delegates in annual session, April 17th, 1923 in the City of Charleston, S. C.

Mr. President and Members of the House of Delegates:

The information contained in this report was obtained by dividing the Counties of the State among the members of the committee and then compiling the data thus obtained.

There is at the present time organized tuberculosis associations in Richland, Sumter, Anderson, Florence, Spartanburg, Greenwood, York and Greenville Counties. These associations have a definite program. In some of the Counties the work has progressed to where institutional care has been provided for cases needing hospitalization. The Committee takes great pleasure in reporting that there are now three Counties having their own Sanatoria. These Counties are Sumter, Greenville and Richland, while there is an endowed Sanatorium in Aiken and the State maintains a Sanatorium at State Park. Charleston is building and Spartanburg has the land ready and will build within the next twelve months. All these institutions have a combined capacity of less than 250 beds for a population of over 1,600,000.

In very general terms the problem is brief-

ly comprehended in the following statement estimated from the Framingham experiment.

1st. How much tuberculosis is there? At least one per cent of the total white population and the Lord only knows what the percentage is among the negro race.

2nd. How many cases should be under care? With each 100 deaths per year there should be 1,000 cases under supervision. In South Carolina last year there were 1,820 deaths reported; so we should have at least 18,200 reported and under medical supervision.

3rd. What percentage of cases should be reported in the early stage? At least 75 per cent. Here we are surely far behind in the matter of early diagnosis.

4th. What are the minimal institutional needs? At least one Sanatorium bed for each reported death per year. In South Carolina we should have 1,820 beds.

5th. What community machinery is needed? Medical machinery to find the tuberculosis cases—a school or factory physician for every 3,000 people. A Clinic with the proper consultation staff. An adequate nursing service—say one nurse to every 3,000 people doing welfare, school, factory and home nursing follow up arrested cases and etc. Adequate institutional care. An adequate educational program. Proper community organization. Reasonable legislation—general sanitation, research and etc.

6th. What will it cost? About \$2.00 per capita. Here it is difficult to separate the cost of tuberculosis work and general public health work.

7th. What results may be hoped for? In the experiment referred to above conducted in Framington, Mass. the mortality has been reduced 33 per cent in three years time; not to mention the great reduction of expense connected with long illnesses and the financial loss from them. The duration of illness is reduced and many people are saved from financial ruin by having their expense divided evenly among the tax payers.

Respectively submitted by the Committee,

Doctors: George R. Wilkinson, James Fouche, and James McDowell.

NEWS ITEMS

ORANGEBURG ORGANIZATION IN
GOOD SESSION

A very interesting meeting of the Orangeburg County Medical society was held here September 20th, at the city hall with a number of doctors not only in the city but in the county present.

Probably the most important matter discussed was a paper read by Dr. E. J. Wannamaker, Sr., of this city, following his investigation of the Abrams treatment, which has been talked of quite a bit in the medical world. Dr. Wannamaker stated that he had read a great deal about the treatment and decided to take up the work and to that end entered the Abrams institute at Chicago, staying one month there studying it and taking the full course. Dr. Wannamaker stated after his investigation not only in Chicago but of clinics elsewhere that the diagnosis from the blood specimen is absolutely worthless. He further said he thought there were self-fooled men in the work and that he thought they were honest in their conviction. After Dr. Wannamaker's investigation he decided not to follow the work. A motion was there made and carried unanimously to have Dr. Wannamaker's paper printed in the various medical journals of America.

Dr. T. M. Stuckey of Cope read a paper on skin diseases and this was discussed by other doctors present. Drs. A. L. Black of

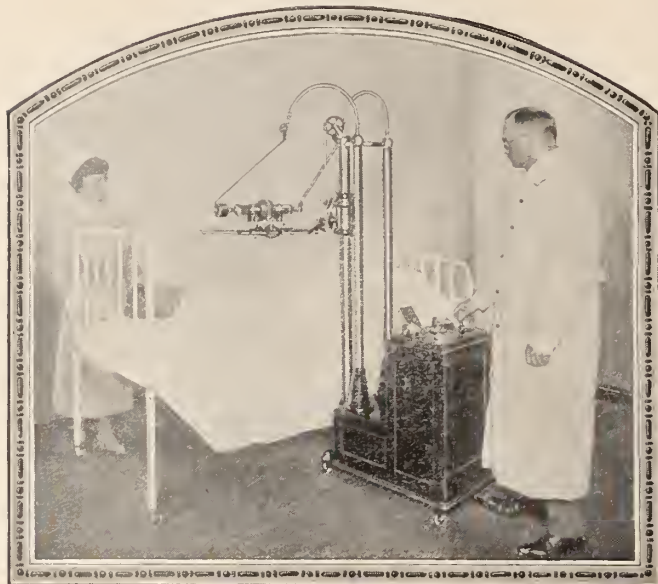
Bowman and H. T. Schiffley of this city then reported their experiences of the medical school that was held at Dr. Smith's hospital this summer in Saluda and urged the doctors to attend these sessions next summer, as they were highly interesting.

The meeting September 20th, was attended by about 15 doctors with Dr. C. I. Green, president, of this city presiding and Dr. G. M. Truluck of this city, the secretary, also present.

Following the business sessions, the members present went to the Orangeburg hospital, where several cases were investigated, and then they went out to the Country Club, where a delicious dinner was served by the women of the auxiliary of the medical society. The Ladies' auxiliary of the society also held a meeting during the morning, of which Mrs. V. W. Brabham is president and Mrs. H. P. Moore, secretary.

Following the dinner, Dr. Charles A. Mobley kindly told of Dempsey-Firpo fight a few days ago in New York City, where he had visited.

The following doctors were present: Drs. C. I. Green, G. M. Truluck, C. A. Mobley, E. J. Wannamaker, Sr., George H. Walker, W. H. Bolin, Lin. C. Shecut, V. W. Brabham, H. T. Schiffley, all of this city; A. L. Black of Bowman, A. W. Connor of Neeses, T. M. Stuckey of Cope, J. F. Wannamaker of Vance and M. L. Nelson of North.



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The Journal

OF THE

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The seal of the South Carolina Medical Association is circular, featuring a caduceus in the center. The text around the border reads "VIRTUE HONOUR WISDOM HUMANITY" and "S.C.M.A. 1848".

VOL. XIX.

GREENVILLE, S. C., OCTOBER, 1923

NO. 10

CONTENTS

EDITORIAL DEPARTMENT:

The Journal Appreciated -----605

ORIGINAL ARTICLES:

The Legitimate Use of Suggestion in the Practice
of Medicine by J. Bennett Townsend, M. D.,
Anderson, S. C. -----606

Tumors of The Pituitary Gland by J. S. Horsley,
Jr., M. D., Richmond, Va. -----609

Birth Control vs. Abortion by F. Julian Carroll,
M. D., Summerville, S. C. -----612

(Contents continued on page ii.)

The Baker Sanatorium

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ARCHIBALD E. BAKER, M. D., F. A. C. S. Surgeon in Charge
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Urological Diagnosis by N. Bruce Edgerton, M. D., Columbia S. C. -----	616
SURGERY DEPARTMENT -----	622
SOCIETY REPORTS -----	623
OBSTETRICS AND GYNECOLOGY -----	625
MINUTES -----	626
CORRESPONDENCE -----	632

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EDITORIAL

THE JOURNAL APPRECIATED

In another part of this issue we publish a letter of appreciation from Mr. B. L. Maltbie, President of the Maltbie Chemical Co. We often wonder as to whether or not our readers realize the fact that the Journal now owes its life very largely to our advertisers. With the high cost of printing which has obtained for some years it is practically impossible for any Medical organization large or small to publish its transactions in any other way and take care of the overhead expenses of the organization itself.

These facts should lead to careful consideration of the interests of our adver-

tisers since they are of the highest class of ethical patrons.

The Journal of the South Carolina Medical Association has been liberally supported by many of the best and most honorable business concerns in the country. We have made every effort to give them good service in return for their confidence.

The success of the Journal has been all the more notable when we recall that it is the official organ of one of the smallest associations from the standpoint of membership represented by an official Journal.

The faith of its founders nineteen years ago was strong indeed in the light of the dissolution of many thousands of medical publications throughout the world since that time.

ORIGINAL ARTICLES

THE LEGITIMATE USE OF SUGGESTION IN THE PRACTICE OF MEDICINE

By J. Bennett Townsend, M. D., Anderson, S. C.

Solomon who is reputed to have been the wisest man that ever lived has said that, "A cheerful heart doeth good like a medicine." Dr. Oliver Wendell Holmes, who also enjoyed the reputation of being a very wise man and a corking good doctor, is credited with having said, "That if all the medicine in the world were thrown into the sea it would be bad for the fishes but good for mankind." Solomon evidently thought that the cheerful heart along with medicine does good. Dr. Holmes more than intimates that we would be much better off without them than with them. Whom are we to believe? It is true that Dr. Holmes was by nature and profession a humorist and all that he said was not to be taken literally. However, we shall have to admit that there are a goodly number of fairly intelligent people who fail to see any joke in the good Doctor's remarks, but receive it as the very truth from Heaven. To prove this assertion, I have only to point you to the Christian Scientist, Osteopaths, Chiropracters, Holy Rollers, Cueits, the Abramits and many other cults who do not believe in the use of medicine in the treatment of disease. It is hardly fair to accuse all of these adherents of the drugless cults of being ignoramuses and fanatics. As a class, I am of the opinion that they will compare favorably in point of intelligence with an equal number of average citizens. Further, we have to admit that

there are those in our own profession who treat disease with diet, baths, electricity, exercise, and other devices and have relegated drugs to a very small and insignificant place. As an example of these, I have only to mention the numerous hospitals of the Seven Day Adventist.

Finally, truth compels us to admit that most of us who pose as the orthodox in medicine have lost much of our pristine faith in the power and potency of many drugs we formerly had implicit faith in, and that as the years go by we not only use few drugs but those few less often. It is said that the great Osler never used more than six drugs in his practice, all of which were poison and I have serious doubts if any of us present have a real intelligent command of that large number of drugs. Do not infer from what I have said that I am a therapeutic nihilist, far from it, I stand with the wise man, and boldly affirm that medicines do good. Who can deny the great good to be derived from the proper administration of digitalis in certain forms of heart disease, of quinine in malaria, of morphine in pain, of salicylates in rheumatism, of oil of chenopodium in hook worms, or mercury and arsphenamine in syphilis, of emetin in amebic dysentery, of antitoxin in diphtheria, of insulin in diabetic coma, not to mention lesser lights which have done valiant service in times of dire need.

No, medicine has not lost its power to alleviate and cure, it has fallen into ill repute with many because it has been ignorantly and carelessly administered. We, of the medical profession, have ourselves to blame for the presence and growth of the drugless cults. Their growth has been so extensive and rapid, their influence so potent for evil, that at last we have become aroused to the importance of protecting the innocent and ignorant public against these

mercenary charlatans. Much good has been accomplished by education and legislation, but yet more is to be accomplished by the medical profession by improving its service and meeting the demand of a certain kind of service.

We have erred not in having great faith in our remedies but in failing to recognize their limitations, we still administer drugs too often empirically and to those whom we have every reason to believe will receive no benefit from them. We excuse ourselves on the grounds that the patient demands medicine, and if we do not load him up, our rival across the street will, and that our standing as a physician is fixed by the number and size of bottles of medicine we prescribe for our patients.

Flushed with the triumph of brilliant success in the treatment of certain diseases with specific drugs, we have unconsciously come to the conclusion that there must be a specific for every form of ailment. It is of little moment to us that the complaint that we are striving to cure with our overworked favorite prescription has no organic base, but belongs to that little understood, but very real class of disease, we call functional. Physicians since the time of the father of medicine have recognized that the mental attitude of the patient has much to do with his health and that much of what we call sickness is in reality a protective reaction on the part of the patient to adjust himself to an unfavorable environment. Much, very much, sickness is due to infection, but we must not forget that bad ideas are as potent at times to disturb the bodily function as bad germs and experience has abundantly proven that it is worse than useless to attempt to cure these diseases with drugs alone. And yet the interest is still administering coal tar products, and oculists are still fitting glasses for those headaches due to domestic infelicity and commonly known as the bad husband headache. Peace proved more potent than digitalis and bromides to cor-

rect the disordered heart action known as the soldier's heart. Why consume more of your time with illustrations, your case records are full of them. In every community there are not a few people who, as far as we can determine, have no organic base for their numerous ailments. We call them hysterical, neurasthenical psychasthenical. As a class, these people are misfits, unfits, biological inferiors, unable to stand the gaff, without the guts to buck life's line they seek to save their face by the simple expedient of resorting to some form of bodily ailment. Being sick is their profession, their means of making a living without work, and obtaining that need of sympathy which they so ardently crave. Oh, you know them all right, you can spot them when they come in your office and I daresay most of us have laid to heart Osler's advice to his students in regard to chronic arthritis, "Young gentlemen when a patient with chronic arthritis comes in your office, jump out of the window as it will be better for the patient and less damaging to your reputation." In spite of our feeling of inadequacy most of us attempt to treat them. We drug them with everything from the cooling mosses of frigid arctic to the gums and balsams of the burning sands of the desert. As a last resort to free ourselves from a nuisance, we refer them to our surgical bretheren, who remove everything from tonsil to toe-nail. Failing to find any relief in scientific medicine, is it any wonder that they give ear to loud and boastful claims of Chiropracter, the Abramite, the quacks and frauds who promise immediate cure and certain relief?

If all who sought relief, from these, our enemies, were made worse it would be better for the world, to say nothing of the medical profession, but unfortunately some few, very few, are made well and another walking, talking, breathing advertisement for these fakes is turned loose on the community. Yes, there is some merit in all

of these drugless cults, possibly some very small grain of truth in all of them. We know that it is by and through the use of Suggestion that they are made free from their ailment. I would not produce the impression that fakers have a monopoly of the use of suggestion. We all use it more or less, and much of our boasted success is due not to our ability to correctly diagnose for we are wrong as often as we are right, not to some inherent virtue in our favorite prescription, for many of them are bunk, but to the Suggestion which goes with our examination, the tone of our voice, the expression of our face and our air that we know what we are about. Not every physician should be expected to be a master in this line, for this is a difficult specialty, but certainly we who are general practitioners should know its possibilities, its mode of administration and its limitations. This limited knowledge will be of great assistance to us in the treatment of some of the simpler forms of functional disease and enable us to hold a goodly number of our patients who would otherwise go to the charlatans.

Suggestion can be of great assistance to us in treating those patients who are disturbed and distressed over the presence of some minor symptom which they have interpreted to indicate the disease of some vital organ. It is not the pain, but what they think of the pain, which is the real malady; an erroneous impression of a minor symptom. A careful examination bringing to bear all of the instruments of precision we possess, together with a plain statement, as to the integrity of the vital organ, and an explanation that he can understand as to the physical origin of his somatic pain, and presto, he is well. We see examples of this every day in our of-

fices. The fellow with a cough thinks he has tuberculosis, the man with Psoriasis suffers the pangs of the damned believing that he has syphilis, and so on.

Then there is another large class of patients who can be greatly helped by the use of Suggestion. These have correctly interpreted the symptoms as to the presence of certain disease. It may be that they have been associated with someone who has had this disease in its terminal stage, or perhaps an unusual virulent form, and they fear that just such a fate awaits them. The patient with a cough has rightly inferred that he has tuberculosis, his conception of the disease is that of the last stages, helpless, hopeless, incurable, a burden to himself and friends, when, as a matter of fact, he is in the incipient stage where with all truthfulness he can be assured that he can be restored to a life of usefulness and fair amount of good health. Here again, correcting an erroneous impression restores him to his former hopefulness and cheerfulness, and makes it possible for him to put a winning fight against his disease.

Suggestion is of great assistance in treating those who are appointed to die, the can't cures of medicine, the nephritis, the cardio-vascular, the arteriosclerotics, the malignant inoperable neoplasms, those who are oppressed with the dread of tomorrow. We can banish many of their fears, assure them of the alleviation of their worst symptoms, soothe, sustain, encourage and strengthen them until such time as the great Physician "Shall give his beloved sleep."

In conclusion, Suggestion is no panacea, there is nothing spectacular or brilliant in its use, but it has a legitimate place in the practice of medicine and every physician ought to know its possibilities and its limitations.

TUMORS OF THE PITUITARY GLAND

By J. S. Horsley, Jr., M. D., Richmond, Va.

Vesalius introduced the name *pituitary gland*. The pituita or phlegm was believed to be excrementitious material, eliminated by the brain and received by the nasopharynx. He also believed that it was collected by the infundibular funnel and eliminated by the pituitary gland. Bartholin recorded another function of the pituitary gland, namely, "to close the infundibulum lest vital spirits should escape."

The history of our knowledge of pituitary enlargements begins with isolated anatomical reports dating from 1700 by Bonnetis and continuing until 1886 when Marie initiated a second period of more minute clinical study, by showing the essential connection between pituitary tumors and acromegaly. Later giantism was included among the clinical phenomena by Cunningham, Brissaud, Roy and others. The association of obesity with pituitary tumors was noted as early as 1840 by Mohr. Frolich, in 1901, and Bartels and Cushing, in 1906, first emphasized the frequency of the association of obesity and hypoplasia of the genital organs with hypophyseal tumors. From these observations the clinical features may be said to date which have led directly to more accurate diagnostic methods and to the development of physical and surgical treatment.

Hypophysectomy was first performed by Sir Victor Horsley, Schloffer, and v. Eiselsberg in 1907, and successful results were soon reported by Hirsch, Cushing and others.

ANATOMY

The normal anatomy of the pituitary gland is complex and several embryological and histological features are of importance in tracing the origin of tumors of this organ. The weight from the third to the

seventh decade averages 0.6 grams, and about 1 cm. in diameter. It is a rounded mass and is lodged in the sella turcica of the sphenoid bone.

The organ consists of (1) an anterior glandular lobe, or the pituitary gland proper, which is developed by an upward evagination of oral ectoderm; (2) a posterior nervous portion which is an elongated portion of nervous tissue derived from the tuber cinereum at the floor of the third ventricle; and (3) a stalk or pedicle which passes through the arachnoid and connects the organ with the tuber cinereum. The anterior lobe is separated from the posterior by a connective tissue septum which usually contains a multilocular cleft, the remains of Rathke's ectodermal pouch. About this cleft Erdheim describes the remains of salivary gland alveoli. The anterior lobe consists of solid branched epithelial cords of irregular caliber, connected with each other by frequent anastomoses. Between the cords and in close relation with them, there are wide lacunar capillaries having a sinusoidal structure. Along the margins of these sinusoidal structures, especially in the central part of the lobe, the cords are covered with eosinophilic cells, having round nuclei; the axial cells of the cords are neutrophilic and less granular. It is not clear whether the two types of cells are distinct or represent different functional phases of the same cell order. At the periphery of the anterior lobe basophilic cells occur. The posterior lobe is a club-shaped mass of glia-tissue which descends from the stalk and partly surrounds and constricts the anterior lobe. It is called, the *pars nervosa*, and has an epithelial investment, the *pars intermedia*. The stalk contains a central cavity, infundibulum, which is the downward prolongation of the third ventricle and is surrounded by a mass of nervous tissue.

FUNCTION

The definite function of the pituitary gland and its subdivisions is still a question

of discussion. Most authorities, however, consider that the anterior lobe has to do with *skeletal growth* and the posterior lobe with effective *carbohydrate metabolism*.

PATHOLOGY

Aside from the recognition of an occasional gross lesion—as gumma, tuberculoma, or neoplasm—the pathological studies have failed to furnish any satisfactory interpretations of the diverse histological changes which the pituitary gland obviously undergoes. Reasons for this are seen in the inaccessibility of the gland; in its changes of appearance at different ages and during critical physiological periods; and in the fact that diseases primary in any other member of the ductless gland series lead to confusing secondary changes in the hypophysis itself.

CLASSIFICATION OF EWING

- (1) *Tumors of the pituitary body*—
 - (a) Diffuse hyperplasia and focal adenoma.
 - (b) Adenocarcinoma.
 - (c) Malignant atypical carcinoma (sarcoma).
- (2) *Tumors of the hypophyseal duct and its derivatives*—
 - (a) Simple cysts.
 - (b) Epidermoid carcinoma.
 - (c) Teratoma.
- (3) *Tumors of the pars intermedia*—
 - (a) Adenomatous, etc.
- (4) *Tumors of the pars nervosa*—
 - (a) Glioma.
 - (b) Sarcoma (?).
 - (c) Lipoma.
- (5) *Miscellaneous tumors*—
 - (a) Cholesteatoma.
 - (b) Dermoid.
 - (c) Varied teratomata.
 - (d) Fetal implantations.

Ewing believes that all the sarcomata which have been reported are really epithelial tumors.

Diffuse Hyperplasia and Adenomata—

Diffuse hyperplasia rising from functional overgrowth occurs in most advanced form after multiple pregnancies. The range of alterations associated with disturbed function is even greater than occurs in the thyroid gland, and it is probable that true tumors develop on the basis of functional hyperplasia. The natural course of these hyperplasias is slow regression, but some probably pass into malignant and progressive adenocarcinoma. The structure presents compact groups or narrow or wide cords of chromophobic cells derived from the chief cells of the gland. On section overgrowth may be diffuse or in about 10% of the cases focal adenomata may appear as opaque spots. The gland usually remains solid and firm, but small cysts filled with colloid may develop and hemorrhages and calcification may occur. A condition similar to that found in the thyroid gland. Acromegaly is associated with this condition.

Adenocarcinoma—Usually these tumors long remain solid, but cysts form colloid secretion, hemorrhage and necrosis. In one group the tumor tends to become cystic from the start and many areas filled with soft colloid material are traversed by thin strands of epithelium or well-marked papillary outgrowths develop. These tumors are difficult to distinguish from papillary epithelioma of the ventricles, but their location emanating from the sella is usually decisive. While the majority of growths long remain encapsulated and preserve the general form of the organ, extension into the brain is often accompanied by diffuse invasion of this tissue. Metastases occasionally occur. These tumors are of a moderate degree of malignancy.

Malignant Atypical Carcinoma—This has usually been reported as sarcoma, angiosarcoma, myxosarcoma, perithelioma or endothelioma, and a considerable proportion of pituitary tumors fall in this class. With a rare exception, these tumors may be classed as atypical carcinomata, according to Ew-

ing. Only in their more atypical structure do they differ from a malignant adenocarcinoma.

Tumors of Hypophyseal Duct and Its Derivatives—These growths are usually of squamous epithelium type, but many present the features of basal-cell carcinoma, and it is probable that certain mixed tumors, or teratoids of the salivary gland type, arise from epithelium of the duct or from salivary gland acini carried along with the oral evagination. Simple cysts develop from distention of Rathke's pouch.

Tumors of the Pars Intermedia—Three cases are reported with an origin from the pars intermedia. Boyce and Beadles, and Erdheim report two cases of a firm tumor composed of large polygonal cells with densely staining cytoplasm. Cushing reported a large adenomatous tumor, resembling the thyroid gland in structure.

Tumors of the Pars Nervosa—A glioma of the posterior lobe is briefly reported by Bury. Two small lipomata were found replacing the posterior lobe by Weichselbaum. They probably arose from fat tissue occasionally seen about Rathke's cyst.

Miscellaneous Tumors—Cholesteatomata and true dermoids containing hair and sebaceous material occasionally appear in or near the sella turcica, but they seldom arise within the hypophysis. Complex teratomata are described by Beck, Cushing, and others and have probably developed by metaplasia from the hypophyseal duct remnants.

INCIDENT

Cushing considers the following factors of special comment in the incident of pituitary body disorders;—inheritance, developmental defects, trauma, physiological epochs of life, and infectious diseases.

FREQUENCY

Tumors of the pituitary gland, considered generally, are relatively infrequent. Among 3620 autopsies at Prague, 4 hypophyseal tumors were found by Klebs,

while Boyce and Beadles collected 6 tumors in 3000 autopsies. Epithelial neoplasms of the anterior lobe, with much excess of eosinophilic or chromophobic cells, are the most common.

SYMPTOMOLOGY

In general, hypophyseal tumors are associated with two main groups of symptoms. Some produce almost exclusively cerebral pressure symptoms and others not only pressure symptoms, but are accompanied by peculiar forms of general dystrophy usually involving other glands of internal secretion. Rarely the tumors are found at autopsy, having run a latent course. To the first group, or those exhibiting the cephalic type of symptoms, belong roughly in order of progression of the disease) *headache, vertigo, vomiting, dimness of vision, bitemporal hemianopsia* going on to *homonymous hemianopsia*, various *cranial nerve palsies, mental disturbances*, etc. To the second group, or those exhibiting the dystrophic type of symptoms, belong *giantism* or *dwarfism, acromegaly*, and *obesity* with *genital hypoplasia*. Giantism is the result of precocious activity of the hypophysis in infancy, while dwarfism follows loss of pituitary function in early life. Acromegaly results from overactivity of the hypophysis in the adolescent or adult. The adiposogenital syndrome, or Frolich's syndrome, is the expression of functional posterior lobe.

TREATMENT

With few exceptions among authorities upon this subject, the choice of operation lies between the trans-sphenoidal and intracranial routes. The trans-sphenoidal can not be rendered absolutely aseptic and, therefore, meningitis is always a possibility. This route is not available for tumors lying adjacent to the pituitary gland and giving hypophyseal symptoms, or for tumors that have extended widely outside the sella turcica. The intracranial route is advisable in the last two conditions, though

inadvisable for tumors confined to the sella. Cysts may be reached and drained by either route, but better results may be obtained from the trans-sphenoidal.

PROGNOSIS

Cysts may be operated upon with very favorable results; adenomata with fairly favorable results; and malignancy with very poor results. Either of the operations, mentioned above, is a comparatively safe procedure in the hands of surgeons skilled in such work. Cushing's first series of 106 trans-sphenoidal and 16 intracranial operations had a combined mortality of 7.4 per cent.

SUMMARY

1. Anatomically the pituitary gland is composed of an anterior glandular lobe, a posterior nervous portion and a stalk or pedicle attached to the floor of the third ventricle.

2. The tumors of chief importance are *adenomata* and *adenocarcinomata* of the anterior lobe; *simple cysts* and *epidermoid carcinoma* of the hypophyseal duct. Other rarer tumors are reported.

3. The symptoms of pituitary tumors may be divided into 2 groups, (1) *Cephalic*, including chiefly the signs of increased intracranial pressure and signs of direct pressure on the optic chiasma; (2) *Dystrophic*, giving rise to various functional manifestations as, giantism or dwarfism, acromegaly, and obesity with genital hypoplasia.

4. The treatment is surgical. The choice of operations is the trans-sphenoidal route in simple cysts and tumors confined to the sella turcica, and the intracranial route for large tumors and adjacent growths either operation is comparatively safe in skilled hands.

5. The prognosis of simple cysts is good; of adenomata fair; and malignant tumors fatal.

BIRTH CONTROL, VS. ABORTION

By F. Julian Carroll, M. D., Summerville, S. C.

Increase in population has become a national and an international fetish; the standard by which nations, states and cities are judged. No matter what the individual wealth, refinement, and education of a community, if it has failed to show an increase in population, that community is adjudged dead. An individual visiting a new city may be shown it's schools, it's art museums, it's monuments, it's factories, but counts all of this of little avail in comparison with the statment that this city "has doubled it's population in the last twenty years", even though this increase is found almost entirely in the slums.

Occasionally some well meaning but sadly misjudged philanthropist like "Kaiser Bill" steps in and starts something which effectually disposes of our surplus manhood, but such methods are both crude and unscientific, because generally speaking, war takes the most fit, physically if not mentally, and leaves the maimed, the halt, and the rest of the physically deficient, besides which war is a mighty nasty as well as a fearfully expensive medicine.

If we want to wipe out small pox, we don't start an epidemic and then cure the patients, for experience has taught us that this disease is far easier to prevent than to cure; then, if we have more children and more grown people than we need and can support, is it not rational to cut down production rather than to attempt to wipe out over-production by war, famine and pestilence the time honored remedies of the past? Should parents who want only two or three children and can hardly support these be made to rear a family of six or seven? Indeed should certain parents have any children at all?

Stoddard in his book *THE REVOLT AGAINST CIVILIZATION* relates.

a typical case of one whose reproduction powers cost the state and the nation many millions of dollars and untold trouble. Listen: From one lazy vagabond nicknamed "Juks" born in rural New York in 1720, whose two sons married five degenerate sisters, six generations numbering about 1200 persons of every grade of idleness, viciousness, lewdness, pauperism, disease, idiocy, insanity, and criminality were traced. Of the total seven generations, 300 died in infancy; 310 were professional paupers, kept in almshouses a total of 2300 years; 440 were physically wrecked by their own "diseased wickedness"; more than half the women fell into prostitution; 130 were convicted criminals; 60 were thieves; 7 were murderers; only twenty learned a trade, 10 of these in state prison and all at a cost to the State of \$1,250,000." This from an investigation in 1877." By the year 1915, the clan had reached its ninth generation and had greatly lengthened its evil record. It then numbered 2820 individuals and had scattered widely over the country, but change of environment had made no material change in nature, and the cost to the state had now risen to \$2,500,000." All of this might have been avoided by the prevention of reproduction in the original "Juke."

But is there any reliable method of preventing reproduction except the totally impracticable one of total abstinence? Personally, I know of none, and the fact that I am the humble father of six proud children bears me out in this assertion. This statement is made, not in the spirit of conscious virtue, nor yet in a spirit of modest humility, for I am quite aware that the majority of doctors share my ignorance on this vital subject: Margaret Sanger says, in her book on the subject of birth control, that there are a number of safe, sure and harmless means of preventing conception, but adds that it is unlawful to dispense this

information. If, however, one cares to pursue this subject farther and will write to Mrs. Sanger, he or more likely, she, will receive a small pamphlet which gives out all the information at Mrs. Sanger's disposal. That Mrs. Sanger's motives are altogether altruistic, may be open to a reasonable doubt. Certain it is that she dispenses suppositories said to be "bland, harmless and a sure remedy" for the condition for which they are employed. In her booklet she gives a number of plans of prevention all well known to the medical profession, and more or less so to the laity. But of these later.

Has the medical profession given this matter the attention it deserves? I think, speaking strictly from the standpoint of health, no doctor will deny that thousands of women become pregnant who should not bear children at all, and many thousands more who could bear some children, bear entirely too many. Recently I operated upon a woman whose third child was born before her first was two years old. At her first delivery, she had received incompetent attention, and at the time she came under my care had a complete laceration, with loss of bowel control. She was in miserable general health. Her husband had quite a family by a previous marriage and at all times lived from hand to mouth; though fairly hardworking, he never seemed able to make a decent living, though always able to make a living child. In short, his capacity for reproduction far exceeded his capacity of production. Under these conditions, and in view of the woman's poor health, I did not hesitate, with the consent, of course, of both the woman and her husband, at operation, to remove one healthy tube along with a diseased tube and ovary, thus leaving her reasonably safe against future pregnancies.

Again: All of us have had to produce an occasional abortion—that abomination of all honest medical men, in cases of hyperemesis grvida, tuberculosis, cancer, decompensating heart, advanced kidney disease, exop-

thalmic goitre, etc. etc.; and many times, perhaps, we have failed to produce an abortion when our better judgment told us that such a procedure was the wiser course; for every upright physician has an uneasy conscience at the thought of terminating a pregnancy, and every intelligent one realizes that it is an operation which should not be lightly entered upon. Personally I would rather do a major surgical operation than bring on an abortion, and this entirely aside from the ethical point of view; but, as I have said, it sometimes has to be done, and under strict limitations, and in view of our ignorance of preventive measures, is entirely justifiable. But is it ever justifiable if preventative methods are possible? I regard the use of contraceptives, if such exist, in cases where pregnancy is a menace to life or even health, in the same category as vaccination for small pox or typhoid fever and believe that this matter deserves the most earnest thought of medical investigators. Should we put women at the mercy of charlatans and quacks, abortionists and fake medicine vendors? If it is true, as has been said, that 2,000,000 abortions are annually performed in the United States, in the vast majority of cases by ignorant and unskillful operators, under the most adverse circumstances, does not this condition cry aloud to the regular medical profession for a remedy. The Catholic church forbids abortions under all circumstances, but, I think, has had nothing to say on the subject of prevention. So once a Catholic woman "gets caught", never mind what menace pregnancy holds out to her, she must face it to the bitter end.

Now as to the known methods of birth control: According to Margaret Sanger, who admits that she is an authority on this subject there are three methods of birth control, namely:

1. Absolute continence.
2. Sterilization.
3. The use of appliances to prevent conception.

Strictly speaking only the first of these is absolutely sure, and this, of course presupposes absolute continence on both sides. This method can be dismissed in a few words, for absolute continence would render marriage the most tragic of farces; and partial continence is worse than useless as has been shown by Lode as quoted by DeLee in his excellent book of Obstetrics. He states that after a period of continence as many as 227,500,000 spermatozoa have been counted in a single discharge while after repeated connections, this number decreases to nil.

2. Sterilization: The first objection to this procedure is that while many women might welcome a limitation of their reproductive powers, few of them are willing to deprive themselves permanently of the possibility of childbearing, and while it is theoretically possible to reunite a resected tube and thus restore fertility, the chances of such a restoration are certainly rather remote, and the necessity of two abdominal operations far from pleasing. On the other hand, there is no absolute guarantee that a resected tube will prevent a future pregnancy. Crosson in his *OPERATIVE GYN-ECOLOGY* quotes from an able article by Leonard (*AMERICAN JOURNAL OF OBSTETRICS*, 1923.) In this article Leonard, speaking of the various methods of sterilization, shows first that ligation of the Fallopian tubes was quite unreliable, both experimentally in animals and in practice on human beings. Impressed with this failure, Kehrer cut the tube between two ligatures placed about the isthmus, but a case reported by Abel in 1899 shows the unreliability of this method, the patient coming to a second Caesarean operation in 1894, the tubes were doubly ligated with silk and cut between the ligatures. Three years later the patient again became pregnant. At her third operation, both tubes were found to have reunited and one was patent throughout its whole length. Resection of the tube with a removal of a wedge shaped piece of the

uterine cornua and covering of the cut ends of the tubes was followed by pregnancy in a case reported from the Bonn clinic. A number of other similar operations have been followed by occasional failures, but for all practical purposes we are fairly safe in assuming that we have secured sterility, if we resect the tube remove a wedge from the uterine cornua, ligate the severed end of the tube, covering it with peritoneum and bury it between the layers of the broad ligament, as suggested by Crosson.

In view of the more or less well known fact that the X-Ray exercises a very potent force in the production of sterility, I had hoped that our X-Ray brethren might come forward with something very helpful along this line, but a personal letter from Dr. Robert W. Gibbes who was slated to discuss this paper, has somewhat dampened my hopes, as he states that at the present time, the danger of this method rather outweighs its possible benefit. If, however, the dosage could be properly controlled, this would appear the ideal procedure.

Then as to the CONTRACEPTIVES, as Mrs. Sanger elegantly calls the methods of prevention: We know that many women feel reasonably secure as long as they are nursing their babies, and to a certain extent this feeling is justified, but only relatively so; for many women menstruate throughout lactation, and are liable to become pregnant at any time, while others become pregnant without ever resuming their menstrual flow. At best this is only reprieve of a few months and the tendency to prolonged lactation which this belief engenders is harmful to both mother and child. Other women place great faith in a theoretical safe period which is supposed to exist between menstruations, from ten days after the last to four or five days before the next. That this hope is illusory is proven by the fact that the spermatozoa have been known to live for as long as twenty-one days in the Fallopian tube after copulation, and the fact that men are

far more fertile after a period of abstinence, which this limitation entails, still farther enhances the danger.

Douches and suppositories are alike unsafe and unsatisfactory, while the incomplete sexual act is unsatisfactory and injurious to the woman certainly, and the man probably, besides being far from a certain preventative, it having been shown that the spermatozoon can migrate from the introitus to the Fallopian tube in a few hours.

Mechanical protection of the male organ is more certain so long as the protective is without blemish, but leaves much to be desired and, frequently, much desire. Female protection by means of pessaries or sponges are even less safe. All of these devices carry with them an array of details which must be rigidly carried out on all occasions, a single lapse being as bad as making no effort at all. In other words, to paraphrase an old saying, "Eternal vigilance is the price of safety." Thus we render an essentially spontaneous act, a business transaction, sweeping away the veil of mystery and putting what should be the acme of love in the same category with any other of the "necessities of nature."

TO SUMMARIZE

1. We have no safe, satisfactory, and reliable method of preventing conception.
2. Sterilizing operations, though relatively certain and sometimes justified, have the objection of permanently depriving a woman of the power of reproduction.
3. There is a real need for a scientific study of this problem by the medical profession.

DISCUSSION.

DR. G. FRASER WILSON (Charleston):

We have to look at this subject from several aspects. First, the legal aspect, which applying to the infant of course is nil, as the infant has no legal aspect until its umbilical cord is cut. Its mother, however, has rights, and you cannot induce abortion in a woman unless she wishes to have it done, notwithstanding the fact that her hus-

band wishes it done. On the other hand, she has a right, or you have a right, to expose her to unnecessary injury if she so desires, notwithstanding the fact that her husband is against it.

We have also the religious aspect. That is the greatest stumbling block I know of; but I do feel that the Roman Catholic Church is right in its stand. However, in the cases I have had I feel the Roman Catholic Church does use a great deal of discretion, and not only that, but gives permission under some circumstances, depending upon the man handling the case, his character and reputation. But they are perfectly right in hewing strictly to the line.

The next thing is, what is the effect of the condition on the patient, and what good is a therapeutic abortion going to do that patient, and finally, can the patient carry the pregnancy to termination? Of course in the old days craniotomy was the only thing left to do to save the woman's life, and as a result there was a great deal of feeling against the medical profession. But we have come to a day where with a contracted pelvis it is not required to do a therapeutic abortion, but they should be carried to termination and delivered by Caesarian section. I do not feel any woman ought to be desexed or have her generative apparatus interfered with unless she has at least three children. I have done Caesarean section on a woman for the fifth time, and she is well and so are her children.

The next thing is hyperemesis. That is the *bete noir* of all of us. I have been using 3 per cent. injections of sodium bicarbonate with good results. I reported this at the Southern Medical Association and everyone seemed to be eager to get the news. A great many had seen marvellous results working with this by themselves. The women improve inside of twenty-four hours, and almost always get well. The only woman I have had who did not improve was one who had atrophy of the liver.

DR. J. J. CARROLL (Closing):

I believe Doctor Wilson thinks I advocate abortion. The only object of the paper, if it has an object, is to get some information on something that will prevent having to produce abortions at all. In other words, to try to get prevention instead of waiting until the condition is present and then attempting to cure.

UROLOGICAL DIAGNOSIS

By N. Bruce Edgerton, M. D., Columbia, S. C.

My purpose of presenting a paper on this subject, Urological Diagnosis, is to acquaint you with some of the diagnostic pitfalls and to call to your attention essential co-operation necessary for accurate diagnosis in this field of Surgical work.

I shall deal with three periods of life, Children, Adults, and Old People, and attempt to point out the diseases most prevalent in each period, elaborating on the diagnosis of certain diseases.

CHILDREN

Babies are sometime born with Renal Calculi. Many of you have noticed sand on the diaper of newly born infants or have had the mother or nurse call it to your attention. Babies should be started off in life with a clean bill of health. Certainly the urine should be examined and a normal or pathological urine noted.

Girl babies and growing girls are more prone to develop pyelitis than are boys, probably on account of less protection due to the short urethra and perhaps on account of a less active existence. However many mothers are not as careful to prevent constipation as they might be and Colon Bacilli so overload the intestinal tract that through absorption the kidneys can't carry the load and infection of the kidney pelvis takes place. Lowered resistance due to infected tonsils and neglected teeth play a part in kidney infection in childhood.

Disease, errors of management or neglect in other parts of the body are the causes of infection in the Urinary Tract in children probably as much if not more than in the adult.

I should like therefore to stress the real importance of a microscopic examination of the urine in all acute and chronic illness

of childhood. We must eliminate the possibility of pathology here before we can diagnosticate the cause of the illness elsewhere. *Chronic* pyelitis should not be diagnosed until radiograms, cystoscopic examinations, ureteral catheterization, and pyelograms if necessary have proven that there is no underlying cause for the infection such as a stone or a stricture of ureter at one of the points of election.

Irregular and improper development of the Urinary organs must of necessity begin in childhood. Abdominal colics repeated may be caused from stone in the kidney, from a kidney developed in an abnormal position, from tumors of the kidneys, malignant kidney or cystic kidney. Practically all diseases of this tract usually render the urine pathological. With regard to the diagnosis of tumors I should like to stress the importance of early diagnosis. "The symptoms are so ill defined that in all cases of obscure abdominal disturbances, unaccountable malaise, or abdominal fullness, even if no urinary symptoms are present the kidney region should be palpated. If a tumor is felt operation should be advised without delay. If resistance is noted even in the absence of tumor an X-ray with air inflation of the colon should be obtained, and an ether examination made. The importance of the relaxation obtained in the palpation of deep seated tumors in childhood cannot be overestimated."

ADULTS

In the young man disturbance of the Urinary apparatus is most often caused by the gonococcus of Neisser. The infection is in the lower half of the tract and the disturbance is also here. There are unmistakable signs of the disease but the microscope should confirm the signs, for other organisms produce disease in this part of the Urinary Tract, notably the Colon Bacillus and Staphylococcus. Mixed infections of the Urethra are commonly seen. An accurate diagnosis should be arrived at before treatment is instituted. None of

these organisms have the potential possibilities of harmful results possessed by the gonococcus; the master of all tragedy in disease of the male genital and lower urinary tract, and of the female genital tract.

Infections of the kidney are of most frequent occurrence in this period of life, the most distressing is tuberculosis. Renal Tuberculosis appears with bladder symptoms more often than with signs that direct to the Kidney. Both day and night frequency with some burning on urination, uncontrolled by the ordinary bladder sedatives should direct you toward the kidney. Urinary frequency of origin in the bladder does not have the regular spaced periods of bladder action as does Tuberculosis. Continued frequency of bladder origin is due to obstruction, stricture, enlarged or congested prostate, peri-urethral abscesses ad infinitum.

In young women and particularly in young married women pyelitis of the newly wed and pyelitis of pregnancy are common. I should like to call your attention to the fact that often times obstruction to the outflow of urine from the renal pelvis such as we have in acute pyelitis causes stretching of the kidney capsule; and a referred pain to the ovary on the same side. I believe that there is a referred pain to the ovary more often in women than there is reference of pain to the testicle in men. I am sure that due to the very intimate relationship of the ovary on the right side to the appendix, the referring of pelvic pain has caused confusion and appendicitis has been diagnosed when the illness was due to pyelitis. Pain and tenderness at the costo-vertebrae angle are always associated with acute renal infection and never with inflammation in the appendix.

Urinary calculi are most common during the middle period of life. Because a stone is something that can be seen and felt after it is passed many of us are sure to figure that acute colic with some symptoms or

signs pointing to the urinary tract is due to stone.

The diagnosis of Urinary calculi and of the conditions that give rise to symptoms simulating renal calculi will be considered together.

The X-Ray is just as essential in the diagnosis of Urinary disease as is the cystoscope. The joint management and interpretation of roentgen ray findings, cystoscopic and microscopic findings, is necessary for accurate diagnosis. Stones in the kidneys, ureters, and bladder cause only a small proportion of urinary colics—in my work about forty per cent. Ureteral kinks and strictures, pyo and hydro nephrotic kidneys, hypernephromas and polycystic kidneys are responsible for a great many of the colics occasioned by pathology in this tract. Nevertheless medical men will have an X-Ray made for stone and if the film is negative, pathology in this tract as the cause of the pain is ruled out. All cases with pus in the urine should be X-Rayed. All patients with pain associated with red blood cells in the urine should be X-Rayed. Not X-Rayed primarily for stone but X-Rayed for differentiation between the various conditions that cause pain referred to the urinary tract, and blood and infection in the urine.

A plain X-Ray picture is usually satisfactory for calculus diagnosis. After the shadow of a stone is demonstrated further work in localization of the stone, in finding out the individual condition of each kidney, and the best method of removal of the stone is necessary. In the removal of ureteral stones by cystoscopic manipulations the X-Ray is most servicable in noting the progress of the stone toward the bladder.

In order to diagnosticate kinks, pus kidneys; malignant kidneys, hydronephrosis, and cystic kidneys the injection of shadow casting fluid into the ureter and kidney is necessary before an X-Ray is made. The diagnosis is dependent on changes in the

outline of the uretero-pelvis shadow on the film. In this work the urologist must have an X-Ray equipment under his control and at his disposal; both as to the time when the exposure shall be made and as to the number of exposures necessary. The complete plant must be at his command. The factors entering into the diagnosis in these conditions are a combination of the findings of the cystoscopic work and of the interpretation of these special X-Ray shadows. The Urologist is the proper man to make these joint interpretations and not the Roentgen worker; another urologist cannot as accurately interpret the work.

I have developed a combined cystoscopic and X-Ray table with a built in Bucky diaphragm in the use of which the patient does not have to be moved; and Urinary Tract X-Ray work is carried to the highest point of present day advancement. In the building of this table I have used some of the ideas of Dr. Bernard H. Nichols the director of the Roentgen department at Crile's Clinic; my table is the second one of this type in use—the Urological Department at St. Lukes Hospital in New York have a Bucky table of the ordinary roentgen type which can be tilted at one end for use in special cases. My table is in daily use as a regular cystoscopic table. As my examination advances and I find that an X-Ray film is necessary the patient is all fixed on the best possible table for the roentgen exposure.

Working out a diagnosis with the complete management of the X-Ray under my control, with a dark room technic at my elbow, I am able to carry my investigations to a definite conclusion. The differentiation of Urinary tract pathology becomes a much simpler matter.

The amount of pain a patient has after cystoscopic examination is directly proportional to the time consumed in the examination and the degree of trauma produced by the manipulations. Under the above arrangement I am enabled to carry out the most searching investigations in my office

and send the patient home the same day. Previously I admitted them to the hospital for 24 hours.

A complete report may be rendered in a minimum of time. A more satisfactory diagnosis is possible where the joint management is vested in one authority. The plan is both time and labor saving, sane reasonable and least expensive.

OLD PEOPLE

Frequent desire to pass water in an old man denotes an abnormality in the Urinary tract. Frequency of urination is pathological not physiological. A great many men do not arrive at what we call old age before they develop obstruction. An obstruction at the neck prostatic of the bladder begins usually with night frequency and slowness of the stream. All of these men should be investigated whether they are 40, 50 or 60 years of age. Any man with residual urine of one or two ounces should have prostatectomy, provided the prostate is enlarged to this extent. Frequency of urination without residual does not call for operation.

In years gone by we were prone to hold the appendix case until an abscess had formed and the danger to life had been inestimably increased. We have learned that the time to operate in appendicitis is as early as things can be made ready. We still keep the old man at home letting him spend his time trying to pass urine, his physical condition going from bad to worse as time elapse. When he arrives at the extreme with complete retention and demands some relief he is brought to the hospital for surgical care. I submit that when he first complains of frequent desire to pass urine, slowness of the stream, his nocturnal rest interfered with that a urinary obstruction should be diagnosed; and he should be referred to someone who has fitted himself to care for these cases. After investigation if he has residual urine removal of the obstructing portion of the prostate gland should be urged.

The dangers from prostatectomy are hemorrhage, sepsis, shock and uremia. All four of these dangers will be reduced to an absolute minimum if we will stop figuring that the old man has already lived out his life; and begin to diagnose these cases and explain to the patient that an operation is inevitable, that an early operation is safe, that the danger is in direct proportion to the time that elapses between the appearance of symptoms and the removal of the obstruction. All of these cases can be done in one stage, the wound will heal quickly, and the old man will spend the rest of his time in peace and comfort. In my private surgical work in a series of forty prostatectomies I have had only one case with as little as three ounces of residual urine—in my earlier experience practically all of the cases had at least from twelve to twenty ounces—some of them as many as thirty-six ounces of residual urine.

In the diagnosis of these cases do not pass a catheter because there is a perfect field for bacterial growth all ready—stagnant urine at body temperature. Make a tentative diagnosis on clinical symptoms, reinforced by a rectal examination and make the man who is going to operate on him take the responsibility for infection following catheterization. Catheterization because of its dangers should be treated as a major surgical operation. The prostate does not abscess as does the appendix; but the bladder and kidneys gradually become infected due to poor drainage; pyelonephritis sets in, complete obstruction develops and he is a much worse risk than any other surgical patient; however nowadays we do not lose many of these. This type of case should be handled by the Urological Surgeon through the pre-operative, operative, and post-operative periods. He should be competent for the entire care of the case. There is no surgical work in which nicer judgment is needed than in these old men on whom the urologist has developed procedures ensuring safe surgery.

In women after several childbirths and the usual perineal lacerations due thereto—after the menopause with its muscular relaxation; bladder symptoms are usually due to residual urine and congested bladder brought on by cystocele. Some women even have a prolapse of the mucosa of the urethra associated and indicated by frequency and burning urination.

The bladder is a Reservoir:

Disease of the bladder in both men and women is always due to disease or obstruction below, around, or above the bladder; disease of the bladder are secondary diseases.

In the diagnosis of Urinary disease we must always look for foci of infection outside this tract for many infections in the Urinary Tract are due to areas of infection elsewhere. Oral Sepsis, Septic Tonsils, etc.

The examination of the urinary tract are more visible to an observer than are the results of any other department of surgical diagnosis. It is probably as precise as any other department but it is not exact. All of us need to still further improve our service and make our diagnosis more correct. As long, however, as the human factor is variable and symptoms of the same disease are dissimilar mistakes are prone to occur. Therefore as practical medical men we can never approach any field of medicine feeling that we are in an exact science.

DISCUSSION

DR. E. C. BAYNARD (Charleston):

I think the most important point in urological diagnosis is to so educate the general practitioner and surgeon that when a case comes to them that is the least bit suspicious, they will refer it then, and not later. The great fault is that they keep their patients too long, and by the time we are able to work them out so much damage has been done that in a good many cases there is nothing left to do but tell the patient nothing can be done for him. This is es-

pecially true in a case of hematuria. A patient comes in who had been treated with ergot and one thing and another, the symptoms disappear and he goes along for two or three years, has another attack of hematuria, is sent to the urologist for examination, and it is too late to do him any good.

One other point is the fact that it is not necessary, as a great many people suppose, that the urine contain pus to have kidney infection. A great many cases I have seen in which the urine has been negative for pus, and yet the patient presented symptoms of pyelitis, but when it is worked out in a thorough manner we do not find pus in the kidney, although we do find a heavy cultural growth, and when that is removed the patient gets better. I have seen a number of these cases recently in which all we obtained from the infected kidney was a heavy growth—staphylococcus—, and when proper treatment was given the patient got better. In the last few years I have almost come to the conclusion that in a great majority of cases pyelitis is secondary to something else. It is cured temporarily, but in six or eight months the patient comes back again with pyelitis. The reason is that the pyelitis is not the primary condition, but only secondary to something else, and you do not find the original cause until the teeth and tonsils and other foci of infection have been examined. In the last few years the patients in whom we found the focus of infection have not come back, while others have, so I have come to the conclusion that in a majority of cases pyelitis is secondary to something else, and if we miss finding the original cause we cannot entirely cure the patient.

DR. W. P. CORNELL (Columbia):

I want to second what the Doctor has said about pyelitis being secondary. I have had it in children at the end of their first year, even before that—babies whose urine has shown pus. In a number of cases tonsils are the focus, and when the tonsils and adenoids are removed the child gets better. Sometimes it does not, and then careful search should be made of the sinuses for focal infection. Only last week I was called to see a baby nine months old with a temperature of 107—not a single leukocyte in the urine, but swarming with bacteria that I concluded were colon bacilli. The cause in that case was a coryza. The cold in the head infected

the tonsils, and I do not believe the child will get well unless the tonsils are removed, or the cold cures itself. But do not expect pus in the urine in every case of pyelitis.

DR. M. H. WYMAN (Columbia):

I want to congratulate Doctor Edgerton on the table he has installed in his office. It is certainly a convenience to himself and to his patients. However, I do not believe it is necessary for the urologist to do his own X-Ray work. If the urologist and X-Ray man work together, as they should, I believe it is absolutely satisfactory. However, it is nice the way Doctor Edgerton has it in his office.

As to tumors in childhood, if you have a malignant kidney in a child you do not usually get bleeding as in adults. The only evidence of the malignancy is the tumor, and it is usually a sarcoma.

I differ on the point that the pain is due to the length of time necessary for cystoscopy and to trauma. I feel the pain is due to distention of the ureter and the kidney pelvis. Take a case of polynephritis of pregnancy, and you can leave the catheter in there for a week and the patient is absolutely comfortable.

I also disagree that the very old man who has an ounce or two of residual urine should have a prostatectomy. There is a condition of the prostate that will cause complete retention of the urine—an inflammatory process. The doctor has to watch the case for a few days to see what it is, and just draining the bladder is all that is necessary.

I do not agree with Doctor Baynard. I do not see how it is possible to have (pyelitis?) without pus. The fact that you find cultures shows infection of the urinary tract. And Doctor Baynard is not correct in his conclusions. He said to watch the patient for awhile, but they are not permanently benefited until the infection is removed. All the time the infection is going through the urine, and the patient will not be cured until the focus is removed. We had a great many men unjustly confined to prison camps on account of venereal infection. Some doctor would come along and see them with a little urethral discharge and say they had gonorrhoea, when perhaps they had an injection the night before.

DR. G. FRASER WILSON (Charleston):

I want to mention the care of the teeth during pregnancy. I have noticed these women do much better where their teeth are properly attended to. I think the dentist is one of the most important men for a woman to see while she is pregnant, because in that way focal infection of the teeth, a causative factor in pyelitis and also in such conditions as eclampsia, is taken care of. I do not think all doctors send their pregnant patients to the dentist.

Another important point is the fact is the apparently blood-stained napkin of the newborn baby. About one in every fifty female babies menstruate, in my experience. It is easy to ascertain the difference by immersing the napkin in boiling water. If it is blood it will stay, and if it is uric acid it will be removed.

DR. W. R. BARRON (Columbia):

We should bear in mind how little we can do to a patient and get accurate diagnosis and relieve the patient—how little can be put that patient through, both in the way of expense and of actual manipulation.

Then the second point it comes to every body how much patience can we have and persuade the patient to have it giving time for accurate, clear-cut diagnosis, before any curative measures are instituted.

A man of twenty-five years recently came to me with a history of a chill every day for ten days. His urine was loaded with pus. The seminal vesicles and prostate were negative, so we concluded we were justified in cystoscopy and catheterization of the ureters. We did this, and everything proved negative. His temperature dropped from 103 to about 100, he said he felt better. We waited four days, and the temperature went up again, we repeated our treatment. Microscopic cultures were negative. We kept that up for two weeks and found that the man had an abscess in the region which it was impossible to find before that time. We opened the abscess and the patient recovered. That brings out the importance of patience in this class of cases.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

FRACTURES OF THE FEMUR IN CHILDREN. TREATMENT AND END RESULTS IN 268 CASES. BURDICK AND SIRIS. ANNALS OF SURGERY 77:736 JUNE 1293.

Fractures of the femur in children are almost invariably followed by a good functional result. A complete anatomical reduction is not essential for perfect function. Marked displacement and overlapping will frequently result in a good functional limb without visible or palpable deformity or shortening. Shortening following union usually corrects itself in one or two years, by which time the injured member will again have attained the length of its corresponding member.

The above deductions are made from a study of 268 cases of fracture of the femur in children up to the age of 13 years.

Of this number 55% were of the spinal and oblique type, 35% were of the transverse, and the remainder comprised comminuted and pathologic types. Sixty-four per cent occurred in the middle 1-3, 20 per

cent in the upper one-third, and the remainder in other locations.

Each fractured femur is treated as an emergency. A towel is placed around the ankle, and to the towel is attached a rope, from which 10-15 lbs. traction weight is made immediately. This relieves pain, prevents further shortening and simplifies subsequent reduction, which is done under general anaesthesia unless specifically contra indicated. A fixation splint is applied in all cases.

The writers state that up until six years of age these fractures are best treated in a Bryant frame with suspension. The degree of rotation and abduction varies with the line of fracture. The suspension is done away with at the end of four weeks and the child is kept recumbent for another two weeks.

Over six years of age, they treat them with plaster and traction, the latter being used to prevent change in the relative position of the fragments.

They use Hodgen and Thomas splints only when the fracture is compound, as these readily permit of necessary wound dressing.

SOCIETY REPORTS

DARLINGTON

September 11, 1923.

The Darlington County Medical Society met at Hotel McFall, in Darlington, on the above date with twelve members present.

The minutes of the last meeting were read and adopted.

Under clinical cases Dr. Edwards reported as case of typhoid fever of severe type, which began having hemorrhages from the bowels at the end of the third week. He asked for the experience of other members of the society in the use of hemostatic serum and fibrinogen stating he had used both with no obvious results in this case. This case was discussed by Drs. J. W. Williamson, Egleston, Stith, Carrigan, and Post.

Dr. Stith reported a case of severe sore-throat, transient arthritis, and high fever with leucocytosis. The throat culture was negative for Diphtheria bacillus, the urine negative except for a trace of albumin. The throat and Joint symptoms cleared up after a few days but the temperature remained high. Widal test is negative. So far a diagnosis has not been made except a probable septicaemia.

Dr. J. W. Beasley's application for membership having been reported upon favorably, by the Board of Censors, he was duly elected a member of the Society.

The President appointed Drs. Wm. Egleston, J. W. Williamson, and T. E. Howle to draw up resolutions on the death of Dr. Watson.

The following resolution offered by Dr Edwards was adopted:

That The Darlington County Medical Society goes on record as condemning the Abram's treatment as quackery and a fraud and that any member of this Society using

such treatment be automatically excluded from membership in the Society.

Dr. Post, County Health Officer, stated that a supply of the following vaccines and serums, issued by the State Board of Health, are kept at Hill's Drug Store, in Darlington, and may be had by any physician in the County:

Typhoid vaccine, Diphtheria antitoxin, Toxin antitoxin, Tetanus antitoxin, Small-pox vaccine and a small amount of Neosalvarsan for indigent syphilitics.

Dr. Post also asked the County Medical Society to endorse the plan on foot to organize an Antituberculosis Society in the County.

The following motion by Dr. Egleston was carried: That The Darlington County Medical Society endorses the plan of organizing a County Antituberculosis Society and that a committee of five, from our Society, be appointed, by the President, to act in an advisory capacity with the Antituberculosis Society, and that this committee consult with the County Commissioners as to the advisability of establishing a place where bed-ridden tuberculous patients may be taken care of or to try to establish a sanatorium in the sixth District where these patients, from the various counties, may be cared for.

J. T. Coggeshall, Secretary.

Meeting Of The
EIGHTH DISTRICT MEDICAL SOCIETY
Hampton, S. C.

Tuesday, August 28, 1923.

At 11 A. M.

PROGRAMME:

Invocation, by Rev. R. W. Humphries.

Meeting called to order by the President,
Dr. J. L. Folk, Fairfax, S. C.

Address of Welcome, by the President of the
Hampton County Medical Society.

Response by Dr. J. E. Warnock, Allendale, S. C.

SCIENTIFIC PROGRAMME:

"Rabies," with report of a case. Dr. N. B. Heyward, Columbia, S. C.

"Caesarean Section," by Dr. Charles Mobley, Orangeburg, S. C.

Some observations on mal-position of the Uterus, by Dr. Robert E. Seibels Columbia, S. C.

Society entertained by the Doctors of Hamp-ton County Medical Society

W. R. TUTEN,
Secretary.

ANNUAL MEETING—RIDGE SPRINGS, S. C.
SECOND DISTRICT MEDICAL ASSOCIATION

10 A. M., Wednesday, July 18th, 1923

1. Remarks by the President.
2. Roll Call (Payment of dues).
3. Reading of Minutes.
4. Clinics and Clinical Reports.
5. Papers and Essays:
 - a. "THE NECESSITY OF MORE CAREFUL EXAMINATION OF OUR PATIENTS"; Dr. W. P. Timmerman.
 - b. "THE TREATMENT OF SKIN DISEASES"; illustrated with lantern slides; Dr. Allison.
 - c. "THE MOTHER—SIX MONTHS AFTER DELIVERY"; Dr. Seibels.
 - d. Medical Subject, Unannounced; Dr. J. H. Gibbes.
 - e. "CONGENITAL PYLORIC STENOSIS"; Dr. Bunch. Discussion opened by Dr. Guerry.
 - f. Address by the President of the South Carolina Medical Association, Dr. L. O. Mauldin, Greenville, S. C.
 - g. Deep X-Ray Therapy by Drs. Rodgers and Pitts of Columbia, S. C.
6. Dinner.
7. Unfinished and New Business.
8. Reports of Committees.
9. Time, Place and suggestions for Program for next Meeting.
10. Election of officers.

Marion H. Wyman, Secretary.

Whereas, Rabies, among dogs, has steadily increased in South Carolina for the past ten years, and in 1922 seven hundred and sixty nine people were bitten by rabid dogs; and

Whereas, Rabies is a fatal disease transmitted to human beings by the bite of a rabid dog; and

Whereas, a vaccine has been perfected which will immunize a dog against Rabies;

Be It Resolved, That the Second District Medical Association recommend to the General Assembly the passage of legislation making the vaccination of dogs against Rabies Compulsory and providing for the free distribution of Rabies vaccine by the State Board of Health.

MINUTES 1923.

The Oconee County Medical Society met at Seneca September 27th. with President B. F. Sloan in the chair.

On roll call the following members were present: W. C. Marrett, J. H. Johns, W. A. Strickland, F. T. Simpson, C. M. Walker, G. T. Hall, W. C. Mays, J. D. Verner, J. W. Bell, B. F. Sloan, E. C. Doyle, J. S. Stribling, and E. A. Hines.

After reading minutes of the previous meeting the regular business was disposed of and on motion the privileges of the floor were extended to the visiting physicians as follows: Dr. W. B. Patton of Newry, Dr. Sinclair of Anderson, and Dr. J. R. Young of Anderson Councilor of fourth District.

Dr. Young read a very comprehensive paper on Intestinal Obstruction. This paper was freely discussed by several members especially by Dr. Johns who opened the discussion.

At the conclusion of the discussion Dr. Young expressed his desire to be helpful to the Society in the capacity of Councilor. He urged frequent meetings of the Society and earnest work therein on the part of the members.

There being no further business the Society adjourned to meet at Walhalla thirty days hence.

E. A. Hines, Secretary.

FOURTH DISTRICT MEETING

The Fourth District Medical Association held its Seventeenth Annual meeting in Greenville on September 18th, in the directors' room of the handsome new Woodside Building. This was the best attended meeting in the history of the Association and was unique in that every member of the Association who was on the program was present and read his paper.

Resolutions requesting the legislature to provide for immunizing dogs against rabies were unanimously adopted.

The following officers were elected:

President, C. O. Bates, Greenville; Vice-President, W. A. Sheldon, Liberty; Secretary-Treasurer, L. Rosa H. Gantt, Spartanburg, for a term of three years.

The invitation to hold the next meeting in Anderson on the third Tuesday in September was unanimously accepted.

The social features were admirably planned

by the Committee on arrangements, Drs. T. R. W. Wilson, C. O. Bates and J. M. Fewell. These being the delightful dinner served at the Ottaray Hotel and a visit to the private hospital of Dr. J. W. Jervey where a tour of inspection was made and delicious refreshments partaken of by the guests.

L. Rosa H. Gantt, Secretary.

OBSTETRICS AND GYNECOLOGY

R. E. SEIBELS, M. D., Columbia, S. C.

INTRAPARTUM SPINAL AND CRANIAL INJURIES.

Especially in breech deliveries, the idea has been prevalent that fetal death was due to asphyxia from pressure on the cord or from drowning during attempts at respiration in utero. This theory was severely shaken by Potter in his demonstration that asphyxia does not develop when as much as a half-hour is allowed to elapse between the birth of the navel and the delivery of the mouth.

Pierson and Crothers (Am. Jour. Obs. & Gyn. 1923, VI, 210) show by autopsy finding that spinal and cranial injuries play the important part in these mortalities and morbidities. In 36 still-births (breech) there were fractures of the vertebrae in 38 per cent. Trauma alone was the cause of death in 50% of the cases. General asphyxia alone was the cause of death in only 5%. Trauma plus asphyxia may have been present in 44%.

It is not necessary to have a fracture either of the cranium or of the vertebrae

to have a injury of the brain and cord. Strong traction applied to the shoulders in a breech and too severe or too prolonged pressure in a forceps delivery, may cause cerebral hemorrhage or rupture of the tentorium. The important results in lesions of the tentorium is the resulting impaction of the medulla in the foramen magnum and destruction of the vital centres.

Neurologists have long claimed that intracranial and spinal birth injuries were accountable for many lesions of the nervous system which have only become apparent in after Life.

The findings suggest to those of us who do obstetrics that again we must examine our mortality and morbidity and decide whether our methods have not been the material agents concerned in results. It is poor policy to hurry a breech if by doing so we may deliver a baby who later on will develop epilepsy.

Autopsy examination of stillbirths should be the routine rather than the exceptional proceeding.

MINUTES

MINUTES HOUSE DELEGATES CONTINUED

REPORT OF STATE BOARD OF HEALTH

The President and Members of the House of Delegates:

It is growing more and more difficult every year to set forth in a brief report the manifold activities and the accomplishments of the Executive Committee of the State Board of Health. These activities are carried on under the supervision of the State Health Officer through six departments and bureaus, viz: the Laboratory Department, Malaria Control Department, Bureau of Child Hygiene, Bureau of Vital Statistics, Bureau of Rural Sanitation and County Health Work, and Tuberculosis Sanatoria to which must be added the work of the Epidemiologist, the State Sanitary Engineer, the Hotel Inspector and the Chemist and Bacteriologist. The results obtained in these various fields of labor have been summarized by the State Health Officer in his Annual Report in which he says that "this has been the most successful year of public health work in South Carolina." The death rate has fallen from 15.4 per 1,000 of population in 1915 to 11.6 for the white and 13.6 for the colored population. No state in the Union shows a lower death rate for the white population. The reduction in the death rate of children is noteworthy. In 1916 the number of deaths among children under one year of age was 4,300, in 1922 the number had fallen to 3,483. In 1916 the number of deaths among children from 1 to 10 years of age was 2,612, in 1922 it was 1,737. A total saving of children under 10 years of age of 1,692.

There has been, however, a distinct reduction in the number of births. In 1921 the birth rate was 29.4 per 1,000 of population and in 1922 it had fallen to 26.8.

The Hygienic Laboratory made 27,638 examinations of which 15,873 were Wassermann tests. 769 people were treated for rabies, 27 of whom were treated at the laboratory, the remainder at their homes. The Director of the laboratory calls attention to the increasing number of rabies victims and advises the prophylactic inoculation

of all dogs. A bill providing for this was introduced at the last session of the General Assembly but it failed to pass. The members of the Association are urged to take up this matter with their legislators and explain its importance so that they will be prepared to act upon it intelligently next year. We respectfully request that the House of Delegates pass a resolution putting itself on record as endorsing the principle of prophylactic inoculation against rabies in dogs and urging the General Assembly to pass a bill putting it into effect.

The appropriation for venereal control work which was withdrawn last year we are glad to report has been restored and this most important work will be resumed.

It is gratifying to note that Captain Fisher who is in charge of the malaria control work states "that the value and importance of mosquito control work in preventing malaria is being appreciated to an increasing extent throughout the state, as is evidenced by the amount of work the towns are undertaking on their own initiative." In Chester there has been an approximate reduction in malaria prevalence of 99%; in Bamberg, Fairfax, Hampton, Ehrhardt and Harleyville a reduction of 90%; in Holly Hill, and St. George a reduction of 85%; in Beaufort of 60%; and in Hartsville of 50%.

The Bureau of Rural Sanitation covers a most important and vital field of work. The statistical report of Dr. Riser includes such constructive work as the installation of septic tanks and of sewerage, the screening of houses, etc., education by means of lectures, distribution of literature, visits to houses, etc., laboratory work, contagious and infectious diseases investigated and preventive measures instituted, medical examination of school children, and free clinics covering tuberculosis, tonsils and adenoids, dental work, child welfare, midwifery classes, and venereal diseases.

The Superintendent of the tuberculosis sanatoria reports that 124 white and 68 negro patients have received treatment. Of the whites 9 were discharged apparently arrested, 7 quiescent and 30 improved. Of the

negroes 2 were discharged apparently arrested, 1 quiescent and 8 improved.

The work of the department of vital statistics, the hotel inspector, the sanitary engineer, the epidemiologist, and the chemist bacteriologist all cover highly important fields and has been thoroughly done. Their contributions have added materially to the efficiency of the State Board of Health, and consequently to the health and comfort of the people of the State.

Respectfully,

Robert Wilson, Jr., M. D., Chairman.

Mr. President and Fellow-members:

Your Committee on Mental Hygiene through its Chairman respectfully submits the following report:

Preliminary—Conditions one would not discuss publicly two decades ago are now customs and in many instances governed by laws.

Mental hygienists are every where finding that the foundations for much mental trouble in later life are laid during childhood. Agencies like the Habit Clinics, the Nursery Schools and the Visiting Teacher movement are giving results worthy of their existence.

What is the picture we visualize on hearing the words "mental disorders" or "mental deficiency?" Is it the popular though distressing one of a person afflicted with acute insanity or of gross idiocy?

To the student of psychiatry or psychology the following conditions should be included in the term "mental disorders:"

- 1 Serious cases of insanity.
- 2 Incipient mild cases—Borderliners.
- 3 Mental diseases stimulating physical invalidism; neurasthenia, hysteria, etc.
- 4 Mental disorders masquerading under conditions labeled from a legal or sociological standpoint such as, a, delinquency,
 - b, alcoholism, and drug addicts,
 - c, prostitution with illegitimacy and venereal diseases,
 - d, vagrancy—dependency.
- 5 Mental defects and disorders in the nursery and the school,
 - a, the feeble-minded child,
 - b, the nervous child,
 - c, the socially inferior child—behaviour problems.
- 6 Social and economic disorders: constitutional psychopaths, cranks, agitators, etc.

Perhaps of all these the most common is the neurasthenic group.

Mental hygiene is concerned, of course, with all of the conditions outlined above, but it should evince a special concern in those cases of plain, every day "nervousness" because of their frequency and because much can be done in the matter of their prevention and treatment. Why it is that to many an attack of appendicitis is often a matter for family pride, while an attack of mental disorder is considered a disgrace, is one of the mysteries of human psychology. But this feeling is well-nigh universal and gives rise to one of the most formidable barriers the mental hygiene movement finds it necessary to remove. The origin of this "stigma" is shrouded in dark and mysterious vagueness, but it operates almost as actively today as it did in the time of Hippocrates. Our investigation shows that its components are Superstition, Prejudice and Ignorance, found with nearly as much frequency among college graduates as in the tenements. It causes people to hide their mentally sick until all possible hope of cure through early treatment has passed. Stigma that surrounds the whole subject of mental diseases causes many tragic deaths and untold suffering and misery through suicide or homicide by obviously sick persons. It should be known among physicians that one of the most common types of so called insanity is often marked by a period when the patient is desperately suicidal. One state gives statistics that 58 per cent of cases of suicide were proved to be due to definite nervous or mental conditions. Stigma causes people to shun hospitals for the mentally sick when they should seek them out, and stigma makes people think of these hospital physicians as jailors instead of Saviors.

The situation requires not so much an attitude of charity as one of common sense and broadness, remembering the difference between disease and disgrace.

The survey of the National Committee for Mental Hygiene of New York City resulted in the estimate of the number of our mental defectives being about 25,000. We are not prepared to accept this astonishing report, but are we prepared to disprove it? Other estimates fall below these figures. We know the number is large, and the more thoroughly we investigate, the larger we shall surely find the number to be. Insanity is slightly on the increase. Mental deficiency is some-

what more rapidly increasing. War records of mental inadequacy are now a part of history.

First. We believe that mental diseases are preventable and that mental health is procurable.

Second. We believe that indiscriminate marriage and reproduction of potentially insane, mental defectives and epileptics is a crime against society and the State. Segregating or carefully supervising these unfortunates is more desirable, but scarcely within our present financial ability. Many are potentially capable of reproducing weak offspring, but we leave severely alone the potential carriers. The practice of eugenics may in time overcome this obstacle.

Third. We believe that whenever the truth is generally known that tidy sums are being wasted every year in our public schools through the efforts to teach and reteach those incapable of profiting by ordinary methods of school instruction by reason of mental deficiency; that some of the nervous children are being put under too much strain; that some of the social misfits are interfering with the progress of others while growing worse themselves; that supernormal children are wasting time in which they may be lured into mischief instead of advancing in school work, that physicians should and will be called upon to equip themselves for service in correcting these evils.

Fourth. A staff at the State Hospital and at the State Training School to make examinations and give advice are highly important, but will not function unless called upon, and will not be called upon often until the public is informed and educated as to their existence and the need of the people for such help, and this carries us back to the cruel effects of the stigma that should be overcome. The physicians may render wonderful service just here.

Fifth. A traveling clinic to assist in the public school work and incidentally reach into the homes is of inestimable value. One physician, one psychologist, one social worker or health nurse and one recording clerk, none of which are ready and looking to find something wrong with every body except the examiners, constitute an ideal traveling clinic staff.

Sixth. We commend our Medical College upon its splendid work of acquainting its students with the principles of insanity and

mental deficiency to a better degree than those of us who have past the portals and found ourselves unlearned, and recommend a continuation of same.

Seventh. The subject of sterilization of certain cases, although considered a dangerous one, we believe has sufficient merit to warrant more serious consideration. There is not as much objection to this in some cases, when properly handled, as may be thought.

Eighth. We believe that we are able to carry the torch even without Professor Coue, and that Christian Science, New Thought, and various other cults, even also Chiropractics, can all be employed best by those understanding the fundamentals of anatomy, physiology, pathology and medicine. We should certainly recognize that the use of psychology with discretion has a place.

Ninth. We delight in the improvement of a species of hogs, horses, cattle, cotton, and would add also in our biological eugencies one having a soul who shall have dominion over all of these.

B. O. WHITTEN, Chairman.

REPORT OF THE COMMITTEE ON STUDY AND PREVENTION OF VENEREAL DISEASES

We will first mention the principal measures that are now being used or under discussion against venereal diseases.

1. The suppression of prostitution.
2. Educational.
 - a. Religious and moral.
 - b. Education of the general public as to the harmful effects.
3. Medical measures, which would include the following:
 - a. The physical examination of those who apply for marriage licenses.
 - b. The use of prophylactic measures by those who expose themselves.
 - c. The treatment of those already infected at clinics and by private physicians.

We wish, in this brief report, to bring to your attention a few important factors in an anti-venereal campaign.

Let us here remind you of the significance of venereal diseases, which create a dark and horrible chapter in life. Dr. Stokes, of the Mayo Clinic, after considering all of the available data in regard to the prevalence of syphilis, states "On the whole, then, it is

conservative to estimate that one man in ten has syphilis. Taking men and women together on the basis of one of the latter to five of the former, and excluding those under fifteen years of age from consideration, this country, with a population of 91,972,266, (based on 1910 census) should be able to muster a very considerable army of 3,842,526, whose influence can give a little appreciated but very undesirable degree of hyphenation to our American public health. In taking stock of ourselves for the future, and in all movements for national solidarity, efficiency, and defense, we must reckon this force of syphilo-Americans among our debits." Osler states that syphilis is third from top among the diseases that cause death, and it is fair to state that at least 30,000 deaths occur each year in the United States from this disease alone. From 60% to 80% of the manhood of our country have had gonorrhoea. Taking the statistics of the army in the recent war, and applying them to the civilian population, at least 10% of our young manhood are now infected with this disease. It is unnecessary to call your attention to the dreadful pathological conditions so commonly seen by all of us from venereal infection, not only with those who pay the penalty through their own indiscreet acts, but also with the innocent women and children of our land.

Dr. George Walker, of Baltimore, and a former South Carolinian, who is known to so many of us, makes this optimistic statement: "It is no utopian, unpractical dream to look forward to the time when venereal disease will be rarely seen." This then, is a most encouraging statement. We do not believe, however, that Dr. Walker makes this statement from anticipating any very material change from promiscuous sexual indulgence, but because he knows that the prevention of venereal diseases can be accomplished to a very material extent through the application of prophylactic measures at our disposal, the proper treatment of those already infected, and along with these, religious, moral and educational measures.

These are the several important phases of the subject which we wish to emphasize in this report: 1. The use of prophylactic measures by those who expose themselves, such was done in all the armies of the world during the late war. 2. The importance of making a diagnosis in primary syphilis.

3. The importance of making careful examinations in the early months of pregnancy for the presence of syphilitic infection and the instituting at that time proper anti-syphilitic treatment for the prevention of foetal deaths and inherited syphilis.

The use of prophylactic measures.—We think that this is the most effective single weapon that we have at our disposal. History teaches that the morals of today are no better than they were centuries ago. Quoting from Dr. Walker, "The fundamental principle in preventing disease is to prevent exposure to that disease; consequently, all measures which would militate against illicit sex relation can be limited and controlled up to a certain point, after which no prohibitive measures of any kind, or forces of moral suasion, will be effective. It is for this group that prophylaxis should be insisted on." That the proper use of the prophylactic measures is highly successful, there can be no doubt. The experience of the army proved this conclusively.

According to Bachmann, the Pennsylvania State Department of Health about three years ago adopted this plan and good results in reducing venereal diseases are already in sight from this measure. We cannot here, of course, take up all the various angles of carrying out of such a plan, but we can tell you briefly what is being done in Pennsylvania. Dr. Bachmann says, "To overcome some of the objections to the prophylactic stations and to make reliable prophylaxis as generally accessible as possible, the Pennsylvania State Department of Health took one of the most progressive steps that any official body has taken for some time. A little more than a year ago this board decided to augment its facilities for putting medical prophylaxis on a practical basis, and considered the advisability of making use of the drug stores throughout the state." "The Pennsylvania idea costs the state nothing-----A marked proportionate, statewide reduction in the venereal rate, not observed simultaneously in the surrounding states, would support the conclusion that the Pennsylvania idea is sound in conception and practical in execution."

Quoting from the Lancet, "Those who condemn the prophylactic treatment on ethical grounds argue that persons who are restrained by fear from indulging in venery may, by the removal of their fear, be tempted to immorality, for which the advocates of

prophylaxis should be held responsible. Putting to one side the fact that fear does not connote any ethical or religious quality, and on the other hand, that the majority of individuals are not restrained by fear, the moral and physical outcome of condemning the policy of auto prophylaxis must be boldly faced. It is certain that many individuals (who are not restrained by fear) will take risks, and in ignorance of prophylactic measures thereby contract disease. This they will pass on to others, particularly women and children. If it can be proven that in all probability the adoption of prophylactic measures would have prevented the primary agent from contracting and handing on the disease, then the advocates of the non-adoption of prophylactic measures will be ethically responsible for the suffering entailed."

Just a few words in regard to the fear of venereal disease in the minds of those who expose themselves and in regard to the effect of the introduction of prophylactic measures on the laxity of morals. Observations have shown that the exposure rate is about the same in those who take prophylaxis as in those who do not.

I think that we can take and stand sure of our ground that Benjamin Franklin is representative of the highest type of intelligence and a typical American character. In his autobiography, he writes:—"In the meantime that hard-to-be-governed passion of youth hurried me frequently into intrigues with low women that fell in my way, which were attended with some expense and great inconvenience, besides a continual risque to my health by a distemper which of all things I dreaded though by a great good luck I escaped it."

Quoting Bachmann, who paraphrased the late Senator J. J. Ingalls: "In the great democracy of sexual impulse, all men stand equal." This, then, tersely states the facts.

The reduction of promiscuous sexual intercourse should be our first object, but all the other measures should be used in conjunction with it. It is not necessary for the unmarried male to indulge in sexual intercourse as may be thought by some.

Taking up the next important factor mentioned in this report, that is, the diagnosis of primary syphilis, we would like to state that great progress was made about 1910 when the dark-field method of examination for syphilis was instituted. This is a simple

method of diagnosis that should be carried out in all cases of venereal sores to find out if syphilis is present. Many innocent looking venereal lesions are really syphilitic and can only be diagnosed by this method. The Wassermann test is of no value until many weeks after the primary sore has appeared, and then, it is unreliable. The main point that we wish to bring out is that the earlier the diagnosis of syphilis is made, and the patient is treated, the greater probability there is that the patient will be cured. Then we wish to condemn to the utmost a practice that has been and is now in use by a great many physicians, and that is the treating of venereal sores with strong caustics and various mercury preparations without first making a diagnosis. The use of these procedures render dark-field examinations practically useless, when if they had not been used, the dark-field examination would enable us to make a diagnosis in almost every case. The healing of a sore by use of the above measures without first making a diagnosis has in many instances allowed the syphilitic to go by untreated with great damage to the patient, family, and community. For many of these cases do not even show up secondary lesions in the usual time.

The third problem.—On account of the enormous prevalence of syphilis, we are of the opinion that the expectant mother who presents herself for medical care should be examined for the presence of syphilis. The Wassermann test affords a valuable aid. If syphilis is found in the early months of pregnancy, it may be expected under proper treatment that the mother will give birth to a healthy child.

Williams, of The Johns Hopkins Hospital, found that 449, or 11.2 per cent out of 4,000 women delivered there in about three years gave a positive Wassermann reaction during pregnancy. 16.29 per cent were found among the blacks and 2.48 per cent among the white women. Think what it would have meant to these mothers and their offspring if syphilitic infection had been found in the early months of pregnancy! It must be borne in mind that a negative Wassermann does not exclude the possibility of syphilis.

One of this committee inquired in regard to the incidence of syphilis among the women of the Lying-In Hospital of New York City and he was informed that it was 3.2 per

cent. In civil practice, we would expect on an average throughout the country practically the same percentage of infection.

Unquestionably, the most fruitful field for prenatal work is in recognizing the presence of syphilis in the early months and in giving proper treatment.

Williams states: "Soon after taking up this work, I realized that the recognition and treatment of syphilis early in pregnancy constituted an important and fruitful field for a radical reduction in foetal mortality, and in my presidential address—" Upon the Limitations and Possibilities of Prenatal Care"—before the American Association for the Prevention of Infantile Mortality in 1915, I developed the idea that more lives could be saved along such lines than by any other single method. That address was based upon the critical study of 700 foetal deaths occurring in 10,000 consecutive deliveries in the Obstetrical Service of The Johns Hopkins Hospital, and included not merely the deaths at the time of labor, but also those occurring during the last ten or twelve weeks of pregnancy, as well as those during the two weeks immediately following delivery. Upon analyzing the causes of death, it was found that syphilis was responsible for 26 per cent of the entire number, and that it caused more deaths than any other single factor, and very many more than the toxæmias of pregnancy, which up to that time had been considered the greatest field for prophylactic effort. Consequently, I concluded that if syphilis could be eliminated from among the causes of foetal death, greater progress in prenatal care would be made than by any other means at present available."

This, then, concludes our report. Only a few of the many problems On Study and Prevention of Venereal Diseases have been brought out.

Respectfully submitted,

Milton Weinberg, Chairman.

Wm. R. Barron,

T. M. Davis.

Committee on study and Prevention of Venereal diseases.

(To be continued)



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WHERE? Washington, D. C.

WHEN? November 12-15, 1923.

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Correspondence

Gaffney, S. C., Sept. 22, 1923.

Dr. E. A. Hines,

Seneca, S. C.

Dear Doctor:

I have seen for years the errors and fallacies that our profession is falling into and am not surprised at the growth of the "Cults" and "Quackeries"—Not having the faculty of expressing my ideas in writing or speaking, have refrained from any expression. In the last issue of the Literary Digest is an article I would be glad if every M. D. in our state at least would thoughtfully read. "What people think of the Doctors." Twenty-two points are mentioned. I have heard them all and then some. If you should think well of it you might publish in the Journal the same with some comment if you should think advisable. With best wishes for you and yours I am.

Very truly and fraternally,
Dr. J. B. Hughey.

Newark, N. J.

September 8, 1923.

Dr. Edgar A. Hines,

Seneca, S. C.

Dear Doctor Hines:—

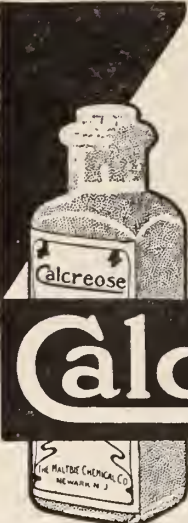
We take the opportunity to compliment you upon the character of the material which goes into the Journal as well as the general make up. You certainly are entitled to a great deal of credit for the work that you are doing.

With personal regards, we remain,

Very truly yours,

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| News Items

WASHINGTON MEETING OF THE SOUTHERN MEDICAL ASSOCIATION

The Southern Medical Association will hold its seventeenth annual meeting at Washington, D. C., Monday, Tuesday, Wednesday and Thursday, November 12-15, 1923. Dr. W. S. Leathers, Executive Officer, Mississippi State Board of Health, Jackson, Mississippi, is President.

This meeting will be made up of twenty sections and conjoint meetings—the programs of these meetings will cover every phase of scientific medicine and surgery. (See marked bulletin for names of sections and conjoint meetings.)

The President of the United States will receive informally the members of the Southern Medical Association and their

wives, Thursday, November 15th, at 12:30 p. m. at the White House. Of special interest to the ladies will be the reception at the Washington Club on Tuesday afternoon where Mrs. Woodrow Wilson will be the guest of honor. The usual reception to the President of the Southern Medical Association will be held on Tuesday night at the New National Museum, one of the most beautiful public buildings of Washington, a detachment of the Marine Band furnishing the music. Other special entertainments being received.

At the first general session on Monday night, in addition to the address of the President, Dr. Leathers, there will be an address by Dr. Geo. E. Vincent, President, of the Rockefeller Foundation, New York, N. Y.; Oration on Public Health by Dr. W. S. Rankin, State Health Officer of North Carolina; Oration on Medicine by Dr. Stewart R. Roberts, Atlanta, Georgia; and Oration on Surgery by Dr. J. W. Barksdale, Jackson, Miss.

A joint dinner by the Section on Surgery and the Section on Radiology, as well as a number of section dinners, will be interesting features of Tuesday evening. The Alumni Reunions which promise to be an outstanding feature of this meeting will be held on Wednesday night and it is ex-

pected that there will be large groups present from all of the leading medical schools.

Physicians who golf are urged to bring their clubs. These will be a golf tournament at which the usual prices will be offered. Play will be over the championship course of the Columbia Country Club.

The University of Virginia Hospital, Charlottesville, have already announced special clinics for Friday and Saturday following the meeting. While no definite announcement has been made yet, it is anticipated that Johns Hopkins and the University of Maryland will arrange clinic programs for Friday and Saturday following the Washington sessions.

Washington has many splendid hotels and every one is assured of comfortable accommodations this year. Special reduced rates have been granted by railroads on the certificate plan. Each member of the Southern Medical Association will receive a certificate without application for it. Any physician who is a member of his state and county medical society although not a member of the Southern Medical Association, who desires to attend this meeting, can have the benefit of these reduced rates by requesting a certificate from the Association office.

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The Journal OF THE South Carolina Medical Association

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GREENVILLE, S. C., NOVEMBER, 1923

NO. 11

CONTENTS

EDITORIAL DEPARTMENT:

Southern Medical Great Success	635
Committee Appointments	637

ORIGINAL ARTICLES:

Practical Tonsil Hemostatics by J. W. Jervey, M. D., Greenville, S. C.	637
Hypernephroma by Marion H. Wyman, M. D., Columbia, S. C.	639
The Relative Value of Medical and Surgical Treatment of Duodenal and Gastric Ulcers by A. E. Baker, M. D., Charleston, S. C.	642

(Contents continued on page ii.)

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27



Duodenal Ulcer with Reference to Acute Perforation by H. S. Black, M. D., Spartanburg, S. C.-----	646
The Technique of Spinal Anesthesia by C. M. Rakestraw, M. D., Chester, S. C. -----	648
UROLOGY DEPARTMENT -----	651
SURGERY DEPARTMENT -----	652
DERMATOLOGY AND SYPHILOLOGY DEPARTMENT----	653
SOCIETY REPORTS -----	655
MINUTES -----	656

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OF THE

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Published Every Month Under the Direction of the Board of Councillors.

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EDITORIAL

SOUTHERN MEDICAL GREAT SUCCESS

The Southern Medical Association met as scheduled in Washington, D. C., Nov. 12 to 16. In many respects this was essentially a Public Health Meeting as the President, Dr. W. S. Leathers, is in charge of the Public Health for the State of Mississippi, and many papers and addresses at the meeting gave evidence of the great and broadminded interest that the physicians of the South are taking in the matter of Public Health.

The scientific papers in all the sections were exceptionally good and the physician who follows any specialty or does general work could find food for thought at any of

the Sectional Meetings that he may have attended.

A reception was given to the ladies attending the meeting on Tuesday afternoon by Mrs. Woodrow Wilson, also a reception was given to them on Thursday morning by Mrs. Calvin Coolidge. A reception was also given to the physicians at a later hour Thursday, by President Coolidge at which he made a short talk expressing his interest in the medical profession and his desires for its advancement.

An interesting side feature of this Seventeenth Annual Session was a conference of Presidents and Secretaries of State Medical Associations and State Health Officers at which Dr. Geo. E. Vincent, President of Rockefeller Foundation gave

an address stressing the the responsibility of the medical profession to humanity. Mr. James A. Tobey of New York, Executive Secretary of National Health Council, gave an address on some practical suggestions for co-ordinated effort in the Campaign for Periodic Health Examinations. Dr. W. S. Rankin, State Health Officer for North Carolina made suggestions urging a closer relationship between County Medical Society and County Health Officer, stressing the point that the duties of both the physician and the county health officer were inseparable.

New Orleans was decided on as the next place of Meeting and Dr. Charles Minor of Asheville, N. C. was elected President.

The attendance at this meeting was unusually good and the Washington hotels had sufficient capacity to accomodate comfortably. There were about fifteen hundred physicians registered, about one hundred and fifty medical students and about five hundred ladies.

The attendance from South Carolina was very good. Among those registered were as follows:

SOUTH CAROLINA

Acker, H. H., Anderson.
 Anderson, L. W., Dunbarton.
 Banov, Leon, Charleston.
 Black, W. C., Greenville.
 Broadway, R. E., Sumter.
 Cornell, Wm. P., Columbia.
 Filby, E. L., Columbia.
 Frontis, D. B., Ridge Spring.
 Glover, S. G., Greenville.
 Green, J. T., Ellam.
 Gress, J. Decherd, Greenville.
 Hayden, A. H., Columbia.
 Hemingway, T. S., Kingstree.
 James, F. G., Greer.
 Jervey, J. W., Greenville.
 Johnson, Francis B., Charleston.
 Latimer, James B., Anderson.
 Littlejohn, T. R., Sumter.
 Mauldin, L. O., Greenville.
 Mayr, H. W. C., Fair Play.

Miller, Jno. H., Cross Hill.
 Moore, J. C., McColl.
 McInnes, G. Fleming, Charleston.
 Mardin, W. H., Anderson.
 Neely, A. Theo, Newberry.
 Nesbitt, J. N., Gaffney.
 Riser, L. A., Columbia.
 Salley, F. P., Union.
 Sanders, J. L., Greenville.
 Sanders, J. O., Anderson.
 Sarratt, S. G., Union.
 Simpson, W. E., Rock Hill.
 Strauss, D. D., Bennettsville.
 Stuckney, H. M., Sumter.
 Taft, A. Robert, Charleston.
 Thomas, P. D., Loris.
 Tyler, G. T., Jr., Greenville.
 Walker, Theron O., Greer.
 Wilson, Robert, Jr., Charleston.
 Young, C. H., Anderson.
 Bailey, C. Williams, Spartanburg.
 Bigger, I. A., Rock Hill.
 Clark, Newton T., Spartanburg.
 Cooper, Ernest.
 Crook, Martin, Spartanburg.
 Crosson, D. M., Leesville.
 Dendy, W. R., Pelzer.
 Dieterich, Frederick H., Charleston.
 Doyle, E. C., Seneca.
 Dulin, Thos. N., Clover.
 Durham, F. M., Columbia.
 Coan, W. P., Spartanburg.
 Fike, A. R., Spartanburg.
 Griffin, H. H., Columbia.
 Hayne, James A., Columbia.
 Hiert, H. G., Ehrhardt.
 McElroy, Arthur P., Union.
 McLeod, F. H., Florence.
 Polliter, R. M., Charleston.
 Roberts, Victor M., Blacksburg.
 Smith, H. M., Columbia.
 Smoot, D. Lesine, Spartanburg.
 Stoddard, J. F., Pelzer.
 Timmerman, W. P., Batesburg.
 Wallace, W. R., Chester.
 Weston, William, Columbia.
 Williams, C. F., Columbia.
 Wilson, G. Fraser, Charleston.
 Wylie, A. M., Chester.

COMMITTEE APPOINTMENTS

The following committee appointments for the South Carolina Medical Association have been announced. Others will be noted in the next issue of the Journal:

On Public Policy and Legislation: Dr. M. H. Wyman, Chairman, Columbia; Dr.

P. V. Mikell, Columbia; Dr. D. M. Crosson, Leesville.

On Constitution and By-Laws: Dr. E. A. Hines, Chairman, Seneca; Dr. C. B. Earle, Greenville; Dr. C. W. Kollock, Charleston.

On Necrology: Dr. J. C. Harper, Chairman, Greenwood; Dr. J. L. Bolt, Easley; Dr. J. S. Stribling, Seneca.

ORIGINAL ARTICLES

PRACTICAL TONSIL HEMOSTATICS

By J. W. Jervey, M. D., Greenville, S. C.

Less than a dozen years ago, at a meeting of the American Laryngological, Rhinological and Otological Society, I had been discussing ligation of bleeding vessels after tonsillectomy, when an able and well-known Northern laryngologist arose and said that it was too difficult a procedure to be used as routine. Shortly after that, at a meeting of the Southern Medical Association in Richmond, I was demonstrating a little appliance I had devised to facilitate such ligations, and in the general discussion following, a Southern laryngologist of good standing and repute observed that the way he stopped hemorrhage after tonsillectomy was to "let it bleed"!

I mention these incidents not as in any way a suggestion that I was the first to employ ligation in the tonsil fossa (though in its use as a routine and systematic procedure I can safely claim to have been "among those present" in the beginning), but simply to emphasize the fact that even so recently as ten or twelve years ago strictly surgical hemostasis was not generally applied to tonsil surgery.

Prior to this many and varied, innocuous and monstrous, and for the most part

impotent, were the methods, medicinal and mechanical, used for the control of hemorrhage, in this area, and, *horrible dictu*, some of these methods are in use even in this present enlightened day of our Lord! Only a few days ago I read in a current medical journal a description of a new mechanical device (merely a modification, by the way, of one of the old forms of "tonsil clamp") for the control of the hemorrhage of tonsillectomy, and it was hailed as a great advance in this field. God save the mark!

"Tonsil clamps" of every conceivable shape, size and mode of action have been in use so long that the memory of man runneth not to the contrary. They are as old as the hills, and if I had my way they might all, *all* be buried under the highest of them, and left to everlasting oblivion, there to lie "unwept, unhonored and unsung."

An objection to most tonsil clamps is that, applied to one tonsil, they interfere with the freedom of operative movements directed to the other tonsil. Again, they maintain pressure and interfere with free circulation in an area where at least a normal blood supply is wanted for the prevention of sepsis and the promotion of repair; they are often difficult to keep in place and therefore often inefficient; they are extremely uncomfortable—even painful—to the patient; and one never knows

how long they must be retained in position.

So much for real practical objections. I have another—an aesthetic one. A nice-looking patient (and the other kind even more so) looks altogether too unhappy and idiotic with mouth propped open, saliva drooling over the chin, and robbed of articulate speech, to satisfy either the artistic instinct of the properly fastidious and cultivated professional man, or the vanity of the poor fish of a victim. Yet the idea of the clamp has such a strangely compelling hold upon the surgical mind that even I, in times past, have felt the almost irresistible yearning, like every other laryngologist worthy of the name that ever lived, to invent a tonsil clamp; but happily the contemplation of the considerations above was a complete prophylactic success, and thus the world is spared the Jervey tonsil clamp!

Other mechanical devices include the Michel or some similar clamp, various ligatures, and pressure such as is afforded by sponges. The latter we all resort to, of course, and in their application and limitations they are strictly surgical. But the Michel clamp, however useful in other fields, has no proper place, in my humble opinion, in tonsil surgery. It is too large and heavy, too dangerous as regards possible loosening and inspiration.

As to the medical or chemical biological hemostatics, the astringents, organic and inorganic, most of them, in my experience, are as snares and delusions. Epinephrin in its various forms, such as adrenalin, suprarenalin, etc., is invaluable both as a preliminary and as an efficient agent in post-operative oozing. In such cases I use this with tannic acid with great satisfaction. But such a monstrous and horrible, clot-forming and trouble-making, old hemostatic as Monsel's Solution I mention only to condemn as being what the

foregoing terms would indicate. Other chemicals and organic preparations are, I think, overrated.

Strictly speaking, and may I say correctly speaking, the surgical control of hemorrhage must always be mechanical. The physical shutting off of the opened end of a blood vessel is not only the desideratum but the demand of good surgery. In tonsil, as in other surgery, this is accomplished quite satisfactorily by ligation. But many find ligation difficult in most cases, and most find it difficult in many cases—for reasons which need not here be expatiated upon.

Neither the suturing together of the pillars, nor the suturing of the pillars over a tampon is an uncommon recourse, but there are very valid objections to both procedures.

What then is the answer?

The Cushing brain clamp.

Some five or six years ago, my friend Oertel, of Augusta, Georgia, spoke to me of this method of control of the hemorrhage of tonsillectomy. It appealed to me. I adopted it experimentally. I have used it ever since, with unceasing joy and never a regret. The bleeding vessel is picked up and the tiny silver wire clamp is applied with the greatest ease and celerity. The result is almost one hundred per cent satisfactory. The tiny clamp is eventually thrown off, expectorated or swallowed—no matter which. If accidentally (possibly never) inspired, it is covered with a slimy mucous coating and is immediately expelled as any other little mucous globule. Occasionally it remains *in situ*, and is a source of minor complaint, when it is easily found and picked off with forceps.

I have here a sample of this little forceps and the little silver wire clamps. They are as simple as they are efficient. Try them and be convinced.

(Demonstration)

HYPERNEPHROMA

By Marion H. Wyman, M. D., Columbia, S. C.

The name hypernephroma was used by Grawitz in 1883 to describe tumors of the kidney which resemble the suprarenal gland in their histological appearance. However, the conclusions of Grawitz that these growths develop from small pieces of aberrant suprarenal tissue is today denied by many pathologists. The name nevertheless is popular, and is accepted to describe the great majority of kidney tumors.

Thompson Walker says: "In recent years it has been shown that carcinoma of the kidney is a rare form of tumor, and that many of the growths formerly regarded as carcinomas belong to the group known as hypernephromas."

Keys states that "Sarcomas of the kidney are extremely rare in the adult, and while the sarcomata compose practically all the renal neoplasms of childhood they are almost exclusively embryonic tumors."

We, therefore, assume in this paper that all new growths of the kidney are malignant, or are potentially so; and, use the name HYPERNEPHROMA as synonymous with MALIGNANT RENAL TUMORS.

Etiologically, nothing is definitely known of these growths and the writer has no theories to offer as to this cause.

A brief pathological report of a case will be made at the conclusion of this paper.

Symptoms: The cardinal symptoms of hypernephroma are haematuria, and tumor.

Haematuria—is the initial and most constant symptom in the vast majority of adult patients. It is present in over 90% of the cases. The bleeding is characteristically abundant; well mixed urine; spontan-

eous; intermittent; frequently painless; and is not influenced by motion or rest.

Tumor formation while not usually noted in the adult is the characteristic symptom of renal new growth in children. Authorities are agreed that only about twenty per cent of hypernephroma in the adult cases have noticeable tumor formation. However, it should be emphasized, that tumor-faction is usually the only symptom of renal neoplasm in children until the cancerous cachexia begin to show itself.

Pain from hypernephromas, although commonly present is not characteristic. It may be caused by clots passing down in the ureter. Perhaps the most characteristic pain is a constant dull aching in the loin which is unaffected by movement, and only temporarily relieved by drugs.

Varicocele is frequently observed in these cases, but is not of as much diagnostic and prognostic importance as was once thought.

Diagnosis—No exhaustive differential diagnostic discussion will be attempted here, but just the most important points will be emphasized. The chief clinical types of hypernephroma are:

First—The type characterized by both haematuria and tumor.

Second—The haematuria type without tumor.

Third—The tumor type without haematuria.

Any and all of these types may and usually do have some pain and later general manifestations of cachexia.

The first type of both haematuria and tumor requires little effort to diagnose, but usually here the prognosis is not good because it is apt to be a late condition.

The second type, where the only symptom we have is haematuria, is the type which gives the urologist his best opportunity to exhibit his diagnostic ability and offers the best prognosis for a permanent recovery. It is our duty as physicians to prove that the source of the haematuria is not caused by a malignancy. In other words, if it is assumed that every patient who passes blood

in his or her urine is suffering with a urinary malignancy, until it is proven not to be, very few patients will die with primary urinary cancer.

The duty of the *general practitioner*, the physician who usually sees the patient first, is simply to recognize that a person has a haematuria, regard it seriously, and then put the burden of diagnosing the CAUSE and SOURCE of the BLOOD up to the Urologist. The Urologist, by the use of special instruments, such as, the cystoscope and X-Ray, can certainly and quickly locate the source of the hemorrhage and in the vast majority of cases the cause. We wish to restate and emphasize, however, that it is our duty to prove that a haematuria is not due to cancer, for it is by this method of exclusion that we usually diagnose hypernephroma.

The last type in which there is a tumor, but no haematuria, is easier to diagnose than the hemorrhage type, for in addition to the tumor there is usually a lowered kidney function, the pyelogram shows the outline of the kidney pelvis to be characteristically altered, and then there is serious danger that metastasis has already taken place.

Case report: This case was selected as a type in which haematuria is the only symptom; the most difficult type to diagnose.

White, female, age 51, married.

Complaint—Blood in urine, backache, and at times some pain on urination.

History—Family history negative.

Past history—married twenty-four years, one child stillborn, no miscarriages. Nine years ago patient had gall bladder drained, and an appendectomy performed, otherwise, the patient's past health has been very good.

Present illness began six months previous to the patient's admission to the hospital. She first noticed pains in the pelvis and tenderness in her lower abdomen. Blood was noted in her urine and she was cystoscoped in Richmond, Va., but told that nothing was found to explain her complaint.

Since that examination she has been more or less confined to her home and has had frequent attacks of profuse haematuria with some pain, of a colicky nature, in the region of the right kidney.

General physical examination—Blood pressure 208-128. General reflexes practically normal. Heart, aortic second accentuated. Lungs, normal. Mucous membrane, pale. Skin, dry and has greenish, yellowish tinge on extremities.

Abdomen, tender in right upper quadrant, extending around and including right costovertebral angle, with some rigidity of muscles in that region also. UNABLE TO FEEL A TUMOR IN EITHER KIDNEY REGION.

Laboratory report—Urine well mixed with large quantity of free blood which settled to the bottom very slowly; very few pus cells noted in the urine. Culture and stained specimen of the urine were negative for any infecting organism. Hemoglobin 73%. Leucocyte 5,700 per c.mm.

X-ray of urinary tract negative for stone, both kidneys appeared normal in size and position.

Cystoscopic examination—Bladder was normal except for slight congestion around right ureteral orifice from which bloody urine escaped. Both ureters catheterized—urine from the left entirely normal, urine from the right shows much blood well mixed with urine. Kidney function, as determined by phthalein, was normal from left kidney; function from right kidney was very much reduced.

Diagnosis—RIGHT SIDED HYPER-NEPHROMA WITH A NORMAL KIDNEY ON THE LEFT SIDE.

Remarks—It will be noted that our diagnosis was arrived at principally by exclusion. Tuberculosis and other infections were excluded by not finding pus or other evidence of infection in the urine. The X-ray was negative for stone, and both kidneys appeared normal in size and position. Other causes of haematuria such as;

a drug, chemical, toxic, and traumatic haematuria were excluded by the history and a short observation in the hospital. The so-called idiopathic or essential renal haematuria would always be regarded as an evidence of early malignancy. Now gentlemen, although we did not have a tumor or any positive evidence of malignancy, except the right sided hemorrhage, with a reduction in function nevertheless, we made an unconditional diagnosis of hypernephroma.

Treatment recommended was right sided nephrectomy, because the only possible mistake which could be made in this patient, who was fifty-one years of age, would be to let malignancy gain headway and possibly extended to other parts of the body where surgical interference would be too late to cure.

Dr. Guerry removed this kidney by a trans-peritoneal route through a right rectus incision. The kidney was about normal in size and situated high up under the costal border. On cross section there was an area about the size of a hickory nut found near the mid line in lower half of kidney. The area appeared to be an encapsulated mass resembling a firm blood clot. The remainder of kidney appeared normal. (This encapsulated mass described above was mistaken for an "apoplexy of kidney" by one of the physicians who viewed it.) MICROSCOPICAL SECTION OF THIS KIDNEY PROVED THE CLINICAL DIAGNOSIS OF HYPERNEPHROMA TO BE CORRECT.

DISCUSSIONS

DR. LeGRAND GUERRY (Columbia):

I believe any surgical procedure, to be in the real sense of the word satisfactory and sound, ought to be based on a reasonable understanding of the pathology in the individual case. The question of nephrectomy is of course simply the removal of the kidney, but I think there is a good deal of latitude in choice of method, based on the pathological feature of hypernephroma. As I understand, most of the authorities are

agreed from more recent pathological studies, that the metastasis of hypernephroma is primarily through the blood stream. You may have a metastasis through the lymphatics, but the primary metastasis in all probability is through the blood stream. The point I wish to get at is this: The ordinary way of removing a kidney is through a loin incision, with the patient on the side, with the middle of the table raised so as to give maximum separation and room to operate. I never shall forget the first nephrectomy I ever did.

This picture is supposed to be a hypernephroma of the kidney. The dark spot you see is a piece of this malignant tissue projecting into the renal vein. A ligature is shown placed around the renal vein. That is the first case I ever did a very large nephroma in which the kidney was taken out through the loin, and with a great deal of difficulty in handling. I finally had to put a clamp on and cut through the pedicle of the kidney and remove the kidney. To my chagrin, when the kidney was taken out there was a piece of the hypernephroma in the bite of the ligature, and I could feel the piece that had gotten behind the ligature and into the free circulation. It is easy to see that the case was not benefitted by the operation. The point I wish to bring out is this—that I think there is a way of getting around that difficulty, especially in early cases. Instead of going in through a loin incision, an incision through the right rectus muscle is made, the same as you make for the gall bladder, only a little longer, and without paying any attention to the kidney at all, make immediately for the renal vein as the first step, then disregard the kidney completely and ligate the renal vein. When you have done that, you have done all you can to prevent metastasis of the growth into the circulation. Then the artery can be easily ligated. But the first thing is to ligate the renal vein.

DR. N. B. EDGERTON (Columbia):

I would like to stress the importance in haematuria of considering the pathology, as Doctor Wyman has mentioned—to find what causes the haematuria. Also in cases of renal colic the importance of considering malignant pathology, rather than in all cases considering the pathology that of calculus. The diagnosis is particularly that of

differentiation between the various sorts of pathology that could arise, and the three cardinal symptoms of this pathology, which are pain, hemorrhage and tumor. We must consider the most serious condition which the patient could have, rather than the least serious. The diagnosis of this condition depends in most cases on the interpretation of the shadow cast from the injection of shadow-casting fluid into the pelvis of the kidney. The tumor Doctor Guerry has illustrated is on the upper pole of the kidney. In that case the kidney has three calices—upper, middle and lower. In tumors of that sort you would have obliteration of the upper calyx. There is only one thing can give that, and that is post peritonéal tumor. The diagnosis is made in most cases by the injection of shadow-casting fluids, and interpreting the shadows cast on the X-ray film.

In tumors of this sort located on the lower pole, instead of having the ureter coming down in its normal position, it was pushed clear across the spinal column.

DR. B. C. CROWELL (Charleston):

As the result of experiments on white rats it was found that the adrenals were not essential for life. It has been found since that aberrant masses of tissue are common in the human. They occur not frequently in immediate association with the renal gland itself, less frequently in the kidney, in the liver, pancreas, duodenum and various other places. Tumors of the type described today may originate from this aberrant mass of adrenal tissue, and the consensus of opinion today is that they are of adrenal origin.

The point made by Doctor Guerry of ligating the renal vein as a preliminary step. I should consider a very important point. These tumors do metastasize most frequently through the veins. I recall one case I had in which the first sign of tumor was an enlarged left testicle. That was excised and proved eventually to be a metastasis which had passed from the left kidney through the renal vein into the spermatic vein and into the testes. At the time the testes was removed the tumor was relatively small, but in three months there was an infection which killed the patient. At other autopsies in cases of hypernephroma of this kind the tumor was shown in the renal vein up to the right auricle, those vessels being completely filled with metastasis.

DR. M. H. WYMAN (closing):

In the last Journal of the South Carolina Medical Association there was a case of hypernephroma of the suprarenal gland reported, supposed to be caused by trauma. There was also an article on malignancy of the urinary tract, emphasizing the importance of diagnosing every case individually.

I was called to see a man over fifty with haematuria. I did not find any pus in the urine when I saw him first. I thought the treatment should be radical and removed the kidney. I am anxious to see what the outcome will be. I do not know.

THE RELATIVE VALUE OF MEDICAL AND SURGICAL TREATMENT OF DUODENAL AND GASTRIC ULCERS.

By *A. E. Baker, M. D., Charleston, S. C.*

The opinions of medical and surgical advocates on this subject are getting closer and closer together. Both are realizing that the patient must be the first consideration; that each case must be studied and treated individually; that in the treatment, that form of therapy must be employed which is best suited to the patient's special needs and this can only be brought about by a far closer co-operation between internist and surgeon in the study as well as in the treatment of these cases; the result of this co-operation will be to the benefit of the patient, as well as to the physician and surgeon. We shall no longer talk of medicine, versus, surgery, but medicine and surgery in the treatment of gastric and duodenal ulcers. In the past the differences of opinions have been largely due to the different types of ulcer seen by the physician and by the surgeon. Virtually every ulcer is first treated medically, and out of this big group is selected a small group of more serious, resistant, complicated cases, with stenosis or recurrent hemorrhage, which go to the surgeon.

Ochsner says that almost all of the fail-

ures in treatment of the internist ultimately come to the surgeon. Therefore, the type of ulcer which most often come to the surgeon are those which have been cured five or six times medically, and at last have to be cured by surgical operation. It is not necessarily the fault of the physician that medical treatment fails so often; for he knows in many cases nonsurgical treatment has not had a fair chance, as one writer tersely puts it—"The sins of the internist are omissions, those of the surgeon, commissions; short comings in the surgical field are more disastrous to the patient."

It is now recognized that almost all peptic ulcers, in their early history should be treated medically, but when they persist and even recur under good medical management and in spite of the patient observing careful living—when serious and repeated hemorrhages occur, when pyloric obstruction does not yield to good medical management, when there is a reasonable suspicion of malignancy. In all of these cases medical management should not be too long persisted in but should give way to exploratory and surgical therapy. No sympathy should be entertained with the position taken by some gastro-enterologists that all ulcer cases must be treated medically, and that surgical therapy should be put off as long as possible and be regarded as the last resort.

The great value of medical management has been clearly shown, especially by Dr. Sippy and his disciples. They have shown that peptic ulcers can be cured medically in the great majority of patients.

To quote Dr. Bevan, "No more brilliant chapter has been written in the history of surgery than the chapter on gastric and duodenal ulcers." We owe to surgeons most of the knowledge that we have of these ulcers—obtained in the operating room on the living patient and also at autopsies made in the last twenty years. We hardly knew that there was such a thing as a duodenal ulcer twenty years ago. The surgeon first demonstrated its existence and frequency. Many mistakes were made in the develop-

ment of this subject by the surgeons. They performed too many gastro-enterostomies, they placed too little value on medical treatment. But in spite of mistakes, great progress has been made, and today we feel that if peptic ulcers do not yield to medical care, modern surgery offers much to these patients.

It was not until the surgeon penetrated the abdomen and actually saw the pathologic condition in the form of peptic ulcers that the present understanding of it was reached. Previous to this development of surgery, ninety-six per cent of peptic ulcers were believed to be in the stomach, as a matter of fact only twenty-five per cent are so situated. It was believed that patients with ulcer suffered pain immediately after eating; we now know that temporary relief follows eating. It was believed that hemorrhage was often a sign of peptic ulcers; we know now that it occurs in less than twenty-five per cent of cases.

"The greatest number of sudden hemorrhages from the stomach, which are not preceded and followed by the ordinary symptoms of ulcer, are not caused by ulcer, but by superficial erosions of the gastric mucous membrane due to toxic hepatitis, the result of focal infection after originating in the appendix, gall-bladder, teeth, tonsils, etc."

Now in regards to the effects of free hydrochloric acid on ulcers, Dr. Sippy states that "all accumulated evidence has demonstrated that when tissue, lowered in vitality, from any cause, is exposed to the digestive action of gastric juice, the surface of that tissue becomes eroded. The healing of peptic ulcer is retarded or prevented by the eroding action of the gastric juice proportionately to the diminution in the vitality of the tissue exposed in the ulcer". He also says that "as an eroding agent, gastric juice is absolutely inert in the absence of free hydrochloric acid". It is then important to realize that the free hydrochloric acid must be completely neu-

tralized in the treatment of these ulcers.

The beneficial influence of gastro-enterostomy in bringing about a cure of gastric and duodenal ulcers through a reduction in the free hydrochloric acidity from fourteen to thirty per cent. This is the explanation of the wonderful relief of symptoms and the apparent and real cures following successful gastro-enterostomy when applied to ulcer associated with pyloric obstruction.

Because of the acid medium gastric ulcer is prone to malignant degeneration. It has been demonstrated that at least sixty per cent of cancers of the stomach develop on the base of a gastric ulcer; whereas cancer formation never develops on a duodenal ulcer, this ulcer being in an alkaline field—only acid conditions favor cancer degeneration. This explains the expediency of thorough eradication of the gastric ulcer. Balfour's cauterization method is now recognized the technic of choice, in that heat by its penetration destroys any cancerous cells that may be in process of development, yet clinically not recognized—whereas, excision by the knife—all tissue cells involved may not be entirely removed.

When is surgery definitely indicated in the treatment of peptic ulcers? In cases in which despite medical treatment the symptoms of ulcer continue to cause distress or interfere with the patient's efficiency; perforation occurs; physical signs of food stagnation, dilatation, hour glass contraction; hemorrhage, etc.

The recognized surgical procedure is to excise the peptic ulcer under certain conditions—and to do a gastro-enterostomy or a pyloroplasty as conditions may indicate. It has been asked how does gastro-enterostomy cure an ulcer in the stomach and duodenum? This has been answered in several ways. Patterson believes that the important factor in the cure is the neutralization of the acid gastric juice by the alkaline bile and the pancreatic juice which pour into the stomach through the new

opening. Bevan believes that the value of a gastro-enterostomy is in the safety valve action of the new opening, the relief of tension. In case of a duodenal ulcer in which the prospects of cure are about 90 per cent he claims that as soon as the gastro-enterostomy is performed, spasm of the Pylorus prevents the gastric contents from passing into the duodenum, and as a result, the gastric juice and food take the course of least resistance and pass out through the new opening. The duodenal ulcer is thus put at rest, is protected from the irritating actions of the gastric contents and wound healing proceeds rapidly until the ulcer is cured. As soon as the ulcer heals the pyloric spasm ceases, in whole or in part, and the gastric contents begin to take the normal course through the pylorus. In the cure of a gastric ulcer by gastro-enterostomy, he believes relief from gastric tension, the free emptying of the stomach and the neutralization of the gastric juice by the bile and pancreatic juice furnish the logical explanation. According to Mayo, "the pathology of duodenal ulcer often differs greatly from that of gastric ulcer, in that the chronic gastric ulcers always have craters; the majority of duodenal ulcers do not have craters, and therefore, often they are not recognized. The gastric ulcers are the callosus type, which penetrate all coats of the stomach to the peritoneum. In the duodenal ulcers are usually erosions; little fissures or cracks extend through to the muscular coat and peritoneum, often difficult to observe. Only the minority of duodenal ulcers have true craters and these usually occur on the posterior wall of the duodenum."

Gastro-jejunal ulcer occurs in about 1 to 2 per cent of gastro-enterostomies, but it never develops after a pyloroplasty. The treatment of this ulcer is to cut loose the gastro-enterostomy, close the jejunal and gastric openings, and make a Finney or Horseley pyloroplasty.

Conclusion

It is most essential to neutralize the acid of the gastric juice so as to prevent the irritating digestive effects of the gastric juice on the raw ulcer surface. In the large majority of peptic ulcers, rest of the patient in bed, rest of the stomach and duodenum by Sippy's technic of diet, neutralization of the gastric juice and the improvement of the general condition of the patient will result, in the course of some weeks or possibly several months, in a complete healing of the ulcer. However, there are very definite exceptions to this rule. When an old callous ulcer seriously impairing the function of the stomach, and situated at or near the pylorus, producing obstruction and deformity, complete healing cannot as a rule, be obtained by medical treatment.

The person who has been cured of a peptic ulcer must realize that the price of a permanent cure is eternal vigilance, and this is true whether the cure has resulted from medical management of surgical operation.

Ochsner says "that we should remember that, following any form of surgical treatment for gastric or duodenal ulcer, we have a badly impaired machine, consequently, if you abuse that machine dietetically after the operation, you are bound to have trouble."

Many theories have been advanced as to the etiology of these peptic ulcers. Undoubtedly the chief direct cause is sepsis through the blood stream from some focal infection—Gall-bladder, appendix and teeth are most often the source of this infection.

DISCUSSION:

DR. J. H. CANNON (Charleston):

I do not think there is any doubt that in gastric and duodenal ulcer the treatment should follow the removal of foci of infection. The case should not be considered as merely a case of ulcer, but should be considered in toto, and the treatment applied to the individual and not to the ulcer.

When we consider the cause of ulcer of the stomach or duodenum we find men who

constitute authority giving various causes, and they certainly have more or less behind what they say. Therefore, a case, no matter whether treated medically or surgically, that is not cured, is due to the fact that the foci of infection have not been removed, that the patient has not cooperated with you sufficiently, that he has not understood that he is not only afflicted for several weeks, but for years, and even if that individual ulcer is cured, it does not remove the focus of infection and there is no reason why he cannot get another ulcer.

I do not think I can cover the subject any quicker than to read the conclusions of a paper I read before the Medico-Chisurgical Society, and which Dr. Baker was kind enough to discuss.

DR. LeGRAND GUERRY (Columbia):

I think the difference between an operator and a surgeon is that the operator operates every case that comes along, and the surgeon tries to select cases that need operation. That is a distinction we need to think of.

I believe in the medical treatment of duodenal ulcer. But I always get a little worried, because we have gone a long way in this question of gastric and duodenal ulcer, and it has taken a wonderful amount of work to put the thing on a sane basis and develop a technique of operation that will cure nearly 95 per cent of cases. That is the reason I feel apprehensive when we talk about medical treatment of ulcer, and yet I certainly believe that most ulcers will get well under proper medical management. What we plead for is a reasonable and fair trial with palliative measures—I mean a trial that would satisfy a reasonable man. When the internist has treated the case five times, I think he ought to be willing to let the surgeon try it once. When an ulcer is treated medically, there is the responsibility the internist must take—to not put a hopeless case into the hands of the surgeon. If you take a case to the surgeon on which everybody has failed, the case is a miserable risk. These ulcers that are on the stomach side in five to ten per cent of cases become malignant. My position is that it is not fair to the surgeon to be made to carry the burden at the operating table when the internist has taken from him the only thing he cannot afford to lose, and that is time.

While we are treating these cases medically it must be only a reasonably trial, because when you keep a case longer you are exposing it to 5 per cent risk from hemorrhage, 5 per cent risk from perforation, and even greater risk of development of malignancy.

DR. J. S. RHAME (Charleston):

In considering gastric ulcer I think we will all agree that the acute ulcers should receive preliminary medical treatment, but we are reminded by Doctor William Mayo of the fact that advising the man with gastric ulcer to take medical treatment is the same as advising the man with tuberculosis to go to Colorado for cure.

Doctor Guerry mentioned the percentage of ulcers above the pylorus that undergo malignant changes. It has been I think satisfactorily proven that as high as 70 per cent undergo malignant change, and in certain sized ulcers the Roentgenologist is unable to make a definite diagnosis. Consequently,

those cases that are chronic I believe should be subjected to proper surgical interference. Of course there are several different methods, but to save these cases from cancer by metastasis we must do something more than treat them five or six times and get a medical cure. I agree with Doctor Guerry that it is not fair to throw the burden on the surgeon at the last. The time is coming when we must pay more attention to the early recognition of ulcers and malignancies of the stomach.

DR. H. R. BLACK (Spartanburg):

I want to say that I thoroughly believe that examination, complete examination of these cases should be made. I have recently had two cases that were brought in only when they had every symptom of acute peritonitis. Fortunately, we were able to save both of them. But early diagnosis and early operation will save them; otherwise you will lose quite a number of cases of acute ulcer of the stomach.

DUODENAL ULCER WITH REFERENCE TO ACUTE PERFORATION

By H. S. Black, M. D., Spartanburg, S. C.

Perhaps the most common complaint of ambulatory patients seeking physicians for advice is for gastric distress, but only about 10 per cent of these patients have pathological lesions in the duodenum and stomach. The remaining 90 per cent are not entities but are groups of symptoms resulting from disease of the appendix, gall bladder, pancreas or some systemic condition.

Duodenal ulcer is more common in the middle age. It is four times as frequent in the male than the female. This may be explained by the more nearly transverse position of the duodenum in women allowing bile and pancreatic juice to enter as high in the duodenum as the pylorus. About 95 per cent of the ulcers occur on the anterior wall and within the first 4 cm. The remaining 5 per cent may be lo-

cated in any other portion of the duodenum.

There are two types of ulcer. In the one there is a definite ulcer with crater formation and thickening and in the other there are definite pin point ulcers in the mucous membrane with little or no induration. Judd has called this the duodenitis type of ulceration in contra-distinction to the true crater ulcer. It is similar histologically to the Hunterian ulcer of the urinary bladder. Judd has also called attention to the presence of the so-called contact ulcers in some 10 or 20 per cent of the cases. These are opposite to the original ulcer.

Following the experiments of Rosenow, how can one question the infectious origin of ulcers? They are embolic infection from some distant foci. One should not lose sight of the fact that the local chemicals may take some secondary part in the formation.

Duodenal ulcer usually begins in the young with a history of belching sour regurgitation and pain coming on from 1 to 3 hours after meals and relieved by food.

It is this hunger pain which is relieved by eating that points towards ulcer. The pain is usually in the epigastrium and associated with it, as a rule, a fairly definite tender area which is just to the right of the middle line and above the umbilical level. Nausea and vomiting might be present or absent. As a rule vomiting does not give relief of pain as in a gastric ulcer unless there be obstruction. The attacks of pain usually are seasonal, being worse in the Spring and Fall, though in some cases the symptoms will abate for months and years only to reappear later with obstructive symptoms or other complications.

Time will not allow for a discussion of the differential diagnosis of ulcer, for a discussion of the analysis of the gastric content, and for a discussion of the X-ray findings but it will suffice to say that the X-ray in the hands of an experienced roentgenologist is the best single diagnostic means at hand. Carman has been able to make positive diagnosis in about 95% of cases. What other abdominal disease can be diagnosed so accurately as this condition before submitting to the knife?

The treatment of duodenal ulcer still remains divided. The internist tends toward medicine and the surgeon toward surgery. The fact is that there are a few cases that need medical treatment and others that need surgery. Those that have been operated upon should be put on a special diet for several months.

It has been suggested by Mayo that medical treatment should be tried in: 1—young people if they can carry out the ulcer management. 2—patients who have little trouble and who can afford protracted treatment might be given an opportunity for relief afforded by medical therapy. 3—patients classified in dangerous groups for operation as those suffering from diabetes, cardio-renal disease, obesity, etc. 4—patients desperately ill who would succumb to operation might be classed as surgical and medical.

In a debate on ulcer held at the Royal

Society of Medicine in England, Bennett believed that the proper method of handling patients with ulcer consists in the immediate treatment of all foci of focal sepsis and an early selection of the cases in which surgery is indicated. Under the latter may be included the following types: 1—all patients with chronic pyloric obstruction. 2—all patients with relapse after a thorough course of medical treatment. 3—all patients with a history extending over many years. 4—all patients with large ulcers adherent to surrounding structure. 5—practically all patients with six hour retention. 6—all patients whose economic situations make prolonged medical treatment impossible.

I believe there are two conditions in which the internist and surgeons agree in regard to treatment. First, that patients suffering with an acute ulcer without complications should have the benefit of medical treatment. Second, that patients with acute perforation and chronic obstruction should be treated surgically.

Most all ulcers seen by the surgeons are of several years standing. Seldom does he see an acute ulcer except where perforation or hemorrhage has occurred. In such cases he is called to treat the complications and not the original cause. It is true that few cases die from hemorrhage and perforation but the number dying is greater than the number dying from surgical operation.

Acute hemorrhage from an ulcer is best treated conservatively. The patient is put to bed with absolute rest, given morphia, ice bag to abdomen, etc. In majority of these cases the hemorrhage will stop and the number requiring immediate operation therefore will be scant. If operation becomes necessary, explore and do what is necessary to control the bleeding and no more, for these cases do not stand long operations. Transfusions are indicated in an occasional case.

Unfortunately one is unable to locate the bleeding vessel in some of the cases, as there is a general oozing from the mucous membrane and not from a definite vessel. Remember that the bleeding may not be

from an ulcer but due to disease of the spleen, liver, appendix, etc.

The one complication of duodenal ulcer that demands acute surgical interference is acute perforation in which the intestinal contents are poured free into the abdominal cavity. The acute perforations are usually on the anterior wall where there is little protection. Occasionally the omentum, gall bladder, or transverse colon will become adherent and seal the perforation. This is more common in the chronic type of perforation.

The fact that the duodenal content in these cases have a tendency to gravitate into the region of the appendix, leads one to make the pre-operative diagnosis often that of appendicitis. Not infrequently the appendix is removed and the surgeon because of seeing slight evidences of infection of this organ closes the abdomen thinking the cause of the patients trouble has been removed. The following morning he may be chagrined to find his patient worse and possibly at autopsy a few days later to find a perforated duodenal ulcer.

In regards to the diagnosing of this condition I have only two things to suggest. First, in the majority of cases a history of duodenal ulcer can be elicited and, secondly, there is no other condition which gives such a hard board like rigidity to the abdominal muscles in such a quick time.

Whenever a patient is taken suddenly ill with severe acute abdominal pain 1 to 3 hours after meals, whether there be a previous history of gastric distress or not and where there is marked abdominal rigidity with patient in more or less shock, perforated ulcer should be suspected and at once this case is surgical. The time that these cases become surgical should be before the time of rupture. There is some discussion as to whether the operation should consist of only closure of the opening or closure of the opening and a gastro-enterostomy. Personally, I have no fixed rule, but treat every case as to the condition. I have a hesitancy in closing these cases

even when operated a few hours after perforation without drainage though some advocate it.

Within the past few months I have had six cases of acute ulcer perforation. In five of the cases the ulcer was closed and no gastro-enterostomy was due to the serious condition of the patient. In the other case, the perforation was so large and the surrounding tissue so friable that no attempt was made to close it but the omentum was sutured over the opening and a posterior-gastro-enterostomy performed. So far as I can ascertain, this is the first case in which the perforation was closed with the omentum, making no attempt to suture the perforation. Drainage was used in each. There was no mortality. No doubt but some of the cases that only had the perforation closed will have to return later for a gastro-enterostomy.

THE TECHNIQUE OF SPINAL ANESTHESIA

By C. M. Rakestraw, M. D., Chester, S. C.

Reporting seventy-seven complete hysterectomies performed successfully with its use.

The technique of spinal anaesthesia has of late been refined to that degree of scientific nicety that the greater part of the dangers and difficulties urged as arguments against its use have been entirely eliminated and the method now bids fair to become the one of choice in the great majority of surgical procedures.

In truth, a careful study of the history of the procedure elicits the fact that the bad results occurred most frequently in the days when cocaine was the drug commonly employed. This drug being of such a high degree of toxicity, so unstable in its physiological effects and so variable in its reaction on different individuals that its dosage was extremely hard to standardize.

Read before the Fifth District Medical Association Camden, S. C., November 8th, 1923.

Then, owing to its susceptibility to heat and moisture, it was impossible to sterilize it and keep it in stock..

In novocaine the above difficulties have all been overcome. With a fusing point of 150° C. it can be autoclaved for a sufficient length of time to insure its thorough sterilization and without effecting in the least its anaesthetic properties while its degree of toxicity is so low that it can be used in sufficient quantity to allow of wide areas of anesthetization without dangerous or distressing reactions.

In preparing novocaine for intra-spinal use the technique is extremely important. In order to avoid the introduction of fine dust particles and other foreign matter into the spinal canal, chemically clean crystals contained in a hermetically sealed ampule, each ampule holding sufficient novocaine for a single anaesthesia must be employed, the ampule of about a 3c. c. capacity to allow the making of a solution of the novocaine directly in the spinal fluid in the ampule.

Due care is also essential in the cleansing and preparation of the needles and syringes in the successful pursuit of the method, for as particles of foreign matter of microscopic size are sufficient, logically, to cause injury to the delicate nerve structure of the cord, extreme care in cleansing the needles and keeping them free of rust, dirt and oil and being certain that the syringe carries no like particles is an important feature of the technique. In effecting this we require an operating room nurse especially trained in this technique or must do it ourselves, and this special cleansing of the apparatus should precede, each operation. After the needles and syringe have been cleansed, or, are what we term *chemically* and *mechanically* clean, they are sterilized in a special sterilizer, a pan used for no other purpose and with the use of distilled water only.

This insures the apparatus against the possibility of having foreign matter deposited upon it by the water, or from other instruments.

The patient is prepared for operation in

the usual way with this exception. Whereas, in general anaesthesia we prohibit drinking water to within six or more hours before operation, in this method we encourage the taking of water^{*} liberally up to within one hour of the operation. The benefit of having a patient well supplied with fluids is self-evident.

One hour before operation the patient is given a hypodermic of morphine one-fourth grain and scopolimine one-one-hundred and fiftieth. The room is then made dark and a special nurse sits at the bedside and perfect quiet insisted upon. Just before the patient is taken to the operating room he is catheterized and a pledget of cotton, saturated in mineral oil, is placed in each ear and a towel laid over his eyes. Patients under the influence of scopolimine are extremely susceptible at times to light and noise, and as the injection is given to allay all apprehension and fear, extreme caution must be exercised against offering any mental suggestion which is calculated to produce a cerebral or emotional reaction.

In the administration of the novocaine the patient sits on the side of the operating table bending forward with a nurse supporting his head. After the skin preparation and the spine a needle is introduced through the space between the eleventh and twelfth dorsal vertebrae and about ten c. c. of fluid withdrawn. The syringe is then detached from the spinal needle which is left in the canal and another needle attached to it and about three c. c. of the fluid introduced into the ampule containing the novocaine and after this has been thoroughly dissolved, the fluid is again drawn into the syringe and again attached to the needle in the spinal canal. Then by degrees, slowly and gently the spinal fluid now containing the novocaine in solution is returned to the spinal canal by introducing about five c. c. then withdrawing three c. c. then re-injecting five c. c. again withdrawing three c. c. re-injecting five c. c. withdrawing five c. c. and at last emptying the syringe into the canal.

At least two to three minutes should be consumed by this procedure in order to give time for the cord to take up the novocaine and hold it at the desired level. A rapid introduction invites disaster by forcing the novocaine fluid too far up the spinal canal.

The novocaine introduced into the canal the patient is placed in the proper position for operation and the work proceeded with.

If it is to be an abdominal procedure the patient can be placed immediately in the Trendelenburg position and the line of incision infiltrated with a one-percent novocaine solution as the nerves supplying the skin frequently come from too high a level for a spinal bloc at the point mentioned to reach.

Knowing the limits of the zone of anaesthesia the use of abdominal packs must be limited to that area. There is little difficulty experienced from this as a rule on the part of the operator and often much benefit is reaped by the patient, excessive packing being often the cause of extensive and avoidable adhesions. Again forcible retraction dragging on the tissues without the zone of anaesthesia can be a source of distress to the patient and render painful a procedure which should be painless and thus bring disrepute upon the method. The above limitations are rather to be desired as they tend to give the patient a better result.

Any operation performed under spinal anaesthesia requires more time and more care as to detail in the preparation of the patient and the apparatus but at the same time it requires a keener knowledge of the nerve supply of a part and a more profound respect for the preservation of this important source of nutrition. It requires a more profound respect for tissue and restrains the surgeon from inducing unnecessary trauma limiting his activities to the field necessarily involved only. It demands of him a nicety and refinement of technique essential to accurate and safe dissection which gives evidence of its worth in the convalescence of his patients.

The post-operative records of cases operated under spinal anaesthesia show a marked absence of shock due, no doubt to the blocking off of the area of trauma from the nerve centers which meets the indication in the prevention of shock, advocated in Crile's theory of anocci-association. There is almost an entire absence of gas-pains, and seldom any nausea and vomiting. This allows of an immediate return to the taking of fluids and a much earlier taking of food. All of which tends to hasten convalescence and shorten the period of morbidity.

The only cases in which the method is contra-indicated are those with a blood pressure below a hundred. These as a rule can be made fit by treatment with the Tr. Digitalis until the pressure is raised to within safe limits.

In view of the above the method should not be confined to what is considered bad ether risks but is applicable to all cases requiring surgical operation on organs below the pelvic brim.

SUMMARY

In offering a summary to the above I wish to emphasize several points of importance.

When the details of surgical, chemical and mechanical cleanliness are observed in connection with the preparation of the novocaine and instruments and the drug properly placed at the level of the twelfth dorsal interspace, no damage is done the spinal cord in the induction of spinal anaesthesia.

Complete anaesthesia can be induced by the use of .120 Mg. of novocaine lasting from one and one-half hours to two hours, in the region below the pelvic brim.

The method produces less shock than that of general anaesthesia for by blocking the operative area from its nerve centers it prevents damage to the brain, meeting the indications advocated by Crile's theory of anocci-association.

The nature of the procedure demands a more refined technique in a given surgical operation and urges a deeper respect for

the physiological functioning of a part than is usually exercised by the average surgeon, at the same time demanding a keener insight as to the finer anatomy of the part invaded.

Novocaine is the drug of choice because of its low toxicity and the ease and certainty with which it can be sterilized.

The psychic elements such as apprehension, fear and hysterical tendencies can be controlled with perfect safety by the use of morphine and scopolomine injected be-

fore operation.

Cases with low blood pressure can be brought to a point of safety for operation by the use of digitalis.

Our experience with the method in bad surgical risks has taught us that it is the method of choice in the great majority of surgical cases.

The above conclusions have been reached after an experience of seventy-seven complete hysterectomies under spinal anaesthesia.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

THE TREATMENT OF ENURESIS

There is no specific for the treatment of all cases of enuresis; however, when treatment is directed to the underlying cause, beneficial results are usually obtained. In those cases where no definite cause can be found, good results may be attained by employment of various measures.

For the systematic handling of cases of enuresis, two main groups may be considered: 1.—congenital—those in which the normal control has never been gained,—which should be about the end of the second year; 2.—acquired—those who have gained normal control but subsequently lost it.

The Congenital Group.—This usually includes children who are suffering from congenital defects, either mental or physical; the mental abnormality may embrace a large number of diseases. Those suffering from this type have practically no chance for improvement unless the defect is due to cretinism or epilepsy. In cretinism, thyroid extract is very beneficial; in epilepsy, luminal or the bromides will do good. Those who have physical defect such as extrophy of the bladder or defective

sphincter, have practically no prospects to be cured; fortunately, these cases are rare.

The Acquired Group.—In this group of cases there is often found some obvious exciting cause. This may be pyelitis, cystitis, stone in the urinary tract, tuberculosis of the urinary tract, vulvitis, balanoposthitis, etc. Most careful investigation of the urinary tract in both girls and boys should be made of those who are suffering from enuresis. It is probable that too much stress has heretofore been placed on adenoids, tonsils and intestinal parasites as the cause of enuresis.

In the majority of cases of enuresis no obvious cause can be found. There is a return to the reflex condition of the infant or the normal control had never been attained. The affected boy or girl usually shows no obvious physical or mental abnormality. Various remedies are tried but there is no specific for all. Reeducation, just as practiced in the young child more than a year old, is advisable. The affected one should be made to void at a regular interval during the day and this interval gradually lengthened; at night the incontinence usually occurs within first two or three hours after going to bed, and it is

well to awaken the child within this time. It is not advisable to restrict the intake of fluids. It will take some months to get results from the training method. The administration of belladonna frequently helps; but it must be given in doses large enough to produce physiological effect. Injection of 5 per cent argyrol, neosilvol, or silvol solution into the posterior urethra and bladder will help and relieve some of the cases.

It is highly probable that many cases of

enuresis are due to endocrine disturbance. This has been observed in many cases that respond to extracts of the glands of internal secretion. Thyroid extract is indicated in some cases; the pituitary extract—whole gland—given in ten grain doses twice daily as an adult dose—for four days consecutively—and then repeated if necessary after a rest of about one week, has been found to give quick relief from this most distressing condition; it will help or cure about 30 per cent.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

ENTEROSTOMY IN INTESTINAL OBSTRUCTION

Long: Texas State Journal of Medicine. April 1923.

Enterostomy in the presence of acute intestinal obstruction is a veritable life saver, when especially indicated.

It is an old operation, performed by Renault in 1763, and later, in 1871, Nelaton and other French surgeons were puncturing the intestine with a trocar for the relief of distention. Since those remote dates but little attention has been given to this operation as a separate entity.

It is indicated in two large groups of cases, first, starvation, and second, obstruction. In the former, where one is slowly perishing or starving for lack of food due to esophageal or gastric obstruction, benign or malignant, a jejunostomy promptly permits nutritive material into the intestinal canal.

Enterostomy is done to prevent and to relieve obstruction, once it has developed.

In intestinal resections, a tube passed into the proximal gut, just above the newly made suture line, permits the escape of gas and fluids, thus lessening the tension

on the sutures. This, in our own, as well as in the author's opinion, is a valuable adjunct to intestinal surgery.

In slowly developing obstruction due to encircling stenosis from malignancy, it is valuable as a means to the thorough evacuation of the gut proximal to the site of obstruction. After evacuation has been completed, the patient's condition has improved, a more formidable attack may then be made upon the growth.

In strangulated hernia, where the condition has become critical, it will occasionally turn the tide, and make the relief of the obstruction practical, where to have attempted such at first would only have invited disaster.

Perhaps its greatest field of usefulness is in acute post-operative intestinal obstruction.

When the obstruction is mechanical, it is the operation par excellence. In septic obstruction it is of little avail.

In the former, there is periodic exaggerated paroxysmal attacks of colicky pain with desire to evacuate the bowels, and the observer can often see and feel the peristaltic waves, as they endeavor to move the obstructing point. In addition auscultation

tion reveals the gurgling sounds so characteristic of mechanical intestinal obstruction.

In a case of this type, enterostomy or the introduction of a small tube into the lumen of the bowel, proximal to the obstruction, will practically always save the patient unless the surgeon has waited too long before performing the operation.

The author usually enters through the original wound, though any point in the right lower abdomen serves just as well.

The entire operation is done under local anesthesia, and the patient is never moved from his or her bed.

After entering the abdomen, utilize the first distended loop of bowel that comes into view, make it taut, pass purse string suture, and with small cautery puncture within the circle, introduce the tube, anchor it in situ, wrap a fold of omentum around the tube at its site of entrance into bowel, fasten it there with a stitch or two, and close abdominal wall up to and around tube. Place the extending end of tube into a bottle to catch the leakage.

The author reports 101 cases with 56 recoveries and 45 deaths.

DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

BISMUTH SALTS IN THE TREATMENT OF SYPHILIS

Since arsenic in the Ehrlich's compound have failed to vanquish Syphilis as first predicted, other forms of treatment are constantly being tried. Of these the bismuth salts seems to be the most promising and much literature is available on the subject. It may be of interest to give you a short summary of the present status of the therapeutic power of bismuth in the treatment of Syphilis at the present time. The following preparations have been used: bismuth subnitrate, oxide, carbonate, sulphid, phosphate, salicylate, citrate, quinin bismuth, sodium and potassium tartrobismuthate, bismuth hydroxid and quinin bismuth of quinin iodid; also a foreign preparation, the exact formula which is not known, bismogenol. These preparations are all given intramuscularly. It seems that up to the present date no safe method of the intravenous administration of bismuth has been found.

Castello in the Archives of Dermatology and Syphilology in an article entitled "The

Value of Bismuth Salts in the Treatment of Syphilis" reports nine cases treated with quinin bismuth iodid. Injections every other day intramuscularly were given beginning with 0.1 gm. and increasing to 0.3 gm. He claims not a single accident in 180 injections and concludes that:

"(1) The bismuth salts have marked antisyphilitic properties.

(2) Quinin bismuth iodid seems to be the compound of choice.

(3) Spirochetes disappear from the chancre and mucous patches after the second or third injection of quinin bismuth iodid.

(4) The primary lesion and all the secondary manifestations heal in a short time, and the general disturbance and headache also disappear after the fourth or sixth injection.

(5) Tertiary lesions respond more slowly, but they finally disappear entirely.

(6) The effect on the Wasserman test is marked. It became negative in seven of nine cases.

(7) Bismuth, in the light of my experience, is entitled to a prominent place

among antisyphilitic remedies. Further experiments will show its real value as compared with the arsenicals and mercurials. Time alone will demonstrate whether bismuth will take the place of the other antisyphilitic or be used in combination with them. It will also show whether the effects are permanent."

Klauder in the Archives of Dermatology and Syphilology, June 1923, gives an exhaustive study of both the chemistry and spirocheticidal effect of bismuth. He employed sodium and potassium tartrobismuthate in aqueous solution and in olive oil and bismuth trioxide in olive oil; same doses as used by Castello. He concludes that as to the spirocheticidal action, bismuth can be placed about midway between mercury and arsphenamin. In this regard, he compares the therapeutic activity of arsphenamin, bismuth and mercury in this way: "The therapeutic activity of arsphenamin is represented by the figure 10, bismuth by the figure 7, and mercury by the figure 4." Further that it should be used particularly in the treatment of syphilitic patients who are hypersensitive to arsphenamin.

Hopkins in the Archives of Dermatology and Syphilology June 1923, in an exhaustive study of bismuth salts on animals and in selected syphilitic patients concludes tartrobismuthate is the most effective salt with Klauder that sodium and potassium in the treatment of Syphilis and place bismuth midway between arsphenamin and mercury in its efficacy in the treatment of Syphilis. He does not expect bismuth to supplant either of the above, but predicts that it will become a distinct factor in the treatment of certain cases.

"Bismuth preparations in the treatment of syphilis." Journal American Medical Association, Chicago, August 25th. 1923, p. 661, the author concludes that Bismuth treatment is not usually injurious if the necessary precautions (observations for beginning stomatitis, examination of urine, etc.) are observed. Intravenous injection

is to be strictly avoided. The therapeutic effect of bismuth is rated by the majority of authors between arsphenamin and mercury. Bismuth compounds may be valuable in cases in which the patients are intolerant to the other drugs used in the treatment of syphilis or resistant to them, as shown by a persistent positive Wasserman reaction.

"Bismuth therapy in hereditary syphilis." M. Cajal and H. Spierer. Presse medicale, Paris, April 18th. 1923, p. 354.

"(1) Bismuth may be used without inconvenient results on syphilitic children.

(2) There is no contra-indication to bismuth treatment in children with inherited syphilis.

(3) It is in the form of trepol (oily suspension of tartrobismuthate of potassium and sodium) that bismuth is most to be recommended for children, since it is active without being painful."

"Bismuth treatment in syphilis." (Bismogenol). Richard Neuendorff. Dermatologische Wochenschrift Leipzig, April 7, 1923, p. 301.

Treatment of syphilis with Bismogenol showed in 43 cases a disappearance of apparent manifestations. The preparation is not without toxic effects for four cases were observed with severe kidney symptoms. Therefore, in its use great care is necessary and further research must show how these dangers can be avoided. The effect on the Wasserman reaction was very slow.

It must be said that bismuth will take its place with mercury when it is possible to reduce to a minimum the danger of injury to the kidneys. What preparation is best, time will show. Trial is being made with intravenous treatment.

It is reasonably concluded from the above studies that bismuth has a decided place in the treatment of Syphilis; that in some cases its use is indicated in conjunction with arsphenamin and mercury, but that it cannot take the place of either drug in the light of the present knowledge.

SOCIETY REPORTS

THIRD DISTRICT MEETING AT GREENWOOD OCTOBER 11, 1923.

A wonderfully successful meeting of the Third District Medical Society was held at Greenwood, October 11th. In the morning at the splendidly equipped Greenwood hospital the following clinics were held:

In the large operating room:

Hysterectomy—Dr. Neel.

Hysterectomy—Dr. Turner.

Breast Amputation—Dr. Fuller.

In the small operating room:

Heriotomy—Dr. Turner.

Breast Amputation—Dr. Scurry.

Appendectomy—Dr. Scurry.

Tonsillectomy—Dr. Turner.

Dinner was served at the Community Hall
at 2 P. M.

MENU

Oyster Cocktail	
Queen Olives	Mixed Pickles
Roast Turkey	
Oyster Dressing	Giblet Gravy
Cranberries	
Rice	Macaroni Pie
Candied Yams	
Hot Rolls	Butter
Lettuce and Tomato Salad	
Mayonnaise Dressing	
Snowflake Crackers	
Ambrosia	Angel Cake
Coffee	
Cigars	Cigarettes

After dinner the following papers were read:

DR. GEO. P. NEEL,

----- Blood Transfusion.

DR. JAMES M. KIBLER,

----- Acute Infective Osteomyelitis.

DR. C. H. BLAKE,

----- Renal Calculus.

DR. HUGH BLACK,

----- Surgical Subject.

DR. R. M. FULLER,

----- Gall-Bladder Conditions.

DR. B. O. WHITTEN,

----- Where Physicians Should Lead.

DR. E. PAUL KNOTTS,

----- Educating Laymen.

C. C. Gambrell, Secretary.

MINUTES

MINUTES HOUSE DELEGATES

(Continued)

Mr. President, and Gentlemen of South Carolina Medical Association:—

Your committee on Necrology beg to report today, sorrowfully, the passing of a large number of our co-workers during the past year. Some of these who have passed had reached an advanced age and had given to their respective communities many years of faithful and unstinted service, many were in the prime of life and had barely reached the zenith in their profession when the merciless hand of death beckoned them come.

We are unable to speak of the many virtues of each one, but we can say that they were men held high in the esteem and affection of those whom they served.

We wish that time permitted us to eulogize each brother, but as we are unable to do this we beg only to report their demise, give their residence, age, graduation and date of death.

In making up this report, we may have unintentionally omitted some names, and if we have we would be glad to have you call our attention to such omissions and we will be glad to incorporate same in this report.

Those who have fallen from our ranks, are as follows:

Frances Asbury Coward, died December 1, 1922 of Acute Bulbar Paralysis. He was born at York, S. C. He was graduated from the Citadel in 1896 and form the Medical College of the State of South Carolina in 1900. Dr. Coward was the founder of the Laboratory of the State Board of Health of South Carolina.

William A. Ross, Forkshoals, S. C.; Southern Medical College, Atlanta, Ga., 1892; member of the South Carolina Medical Association; aged 56; died at Greenville, January 30, from heart disease.

Alonzo E. Clough, Madison, S. C.; College of Physicians and Surgeons, Keokuk, Iowa, 1878; formerly served as chairman of the Republican state committee; died, February 26.

Miles J. Walker, York, S. C.; Louisville, (Ky.) Medical College, 1879; member of the

South Carolina Medical Association; member of the state board of health; died, July, 11, aged 65, at a hospital in Richmond.

Enos Walter Dickson Wright, Langley, S. C.; Baltimore Medical College, 1894; aged 50; died, December 4, at the Margaret Wright Hospital, Augusta, Ga., from a fractured skull, received when the automobile in which he was driving was struck by a train.

Absolom Jerome Christopher, Laurens, S. C.; Atlanta Medical College, Atlanta, Ga., 1888; member of the South Carolina Medical Association; died, January 11, at Rochester, Minn., following an operation.

Frank Kennedy Holman, Sumter, S. C.; University of Pennsylvania School of Medicine, Philadelphia, 1901; member of the South Carolina Medical Association; was found dead, February 23, in his bathroom, from phenol poisoning presumably self-inflicted, aged 46.

Joseph Evans Brunson, Ninety Six, S. C.; University of Georgia Medical Department, Augusta, 1892; member of the South Carolina Medical Association; died, February 20, aged 72.

Robert Leroy Douglass, Rodman, S. C.; Medical College of the State of South Carolina, Charleston, 1890; died, September 13, aged 56, from cerebral hemorrhage.

George W. Heinitsh, Spartanburg, S. C.; Jefferson Medical College, Philadelphia, 1879; member of the South Carolina Medical Association; died, April 4, aged 63.

Robert Charles McManus, Lancaster, S. C.; Medical Department of the University of the City of New York, 1881; died, August 9, aged 63, from carcinoma of the stomach.

William J. Holloway, Chappells, S. C.; University of Georgia Medical Department, Augusta, 1868; aged 77; died, December 28.

Robert A. Lancaster, Columbia, S. C.; Medical College of Virginia, Richmond, Va., 1882; member of the South Carolina Medical Association; at one time president of the Florida Medical Association; died, October 16, aged 62, from cerebral hemorrhage.

John M. Crenshaw, Liberty, S. C.; Atlanta Medical College, Atlanta, Ga., 1882; died June 2, age 65.

Joseph B. Du Rant, Lake City, S. C.; University of the South Medical Department, Sewanee, Tenn., 1900; age 46; died, December 8, from influenza and pneumonia.

Lawrence Whiteford Nettles, Camden, S. C.; College of Physicians and Surgeons, Baltimore, 1885; died, June 26, age 69.

Walter C. Hemingway, Hemingway, S. C.; Medical College of the State of South Carolina, Charleston, 1900; died, June 3, age 45, from burns received in the explosion of a gasoline tank when he was sterilizing some instruments.

Butler W. Cobb, Greenwood, S. C.; University of Georgia Medical Department, Augusta, 1885; age 70; died, January 2.

Rufus Berley Epting, Greenwood, S. C.; University of Maryland School of Medicine, Baltimore, 1885; age 65; died, February 18.

Theodore Elliott Wannamaker, Jr., Char-raw, S. C.; Jefferson Medical College of Philadelphia, 1906; age 41; died, March 13.

James Woods Babcock, Columbia, S. C.; Medical School of Harvard University, Boston, 1886; died, March 4. Dr. Babcock was born in Chester, S. C., Aug. 11, 1856; received his A. B. from Harvard University, 1882; former president of the National Association for the Study of Pellagra; for the past ten years proprietor of the Waverley Sanitarium, Columbia; chairman of the South Carolina State Hospital Commissions; member of the Columbia Board of Health; professor of psychiatry, Medical College of the State of South Carolina, 1915; member of the American Medico-Psychological Association and the South Carolina Historical Society. He published monographs on insanity, and wrote, with C. H. Lavinder, the first treatise on pellagra in English.

Pettus Gray Ellesor, Newberry, S. C.; Medical College of the State of South Carolina, Charleston, S. C., 1894; member of the South Carolina Medical Association; died, August 14, age 53.

J. D. S. Fahey, Orangeburg, S. C.; Medical College of the State of South Carolina, 1884; died, September 13, age 62.

James Jeter Glenn, York, S. C.; Medical College of the State of South Carolina, 1910; died, March 1, age 34, from pneumonia.

Walter D. Nicholson, Columbia, S. C.; Medical College of the State of South Carolina, Charleston, S. C., 1860; Civil War veteran; age 87; died, October 6, at the Confederate Soldiers' Home, from rheumatic fever.

John Robert Coleman, Shelton, S. C.; Medical College of the State of South Carolina, Charleston, 1887; died, July 24, age 57, at the Pryor Hospital, Chester, from lymphatic leukema.

James M. McCallum, Leeds, S. C.; Medical College of the State of South Carolina, Charleston, 1859; Confederate veteran; age 87; died, January 21, from senility.

James Carlisle Harmon, McCormick, S. C.; Jefferson Medical College, Philadelphia, 1918; served in the M. C., U. S. Army, during the World War, with Jefferson Hospital Medical Unit; age 28; died, November 26, at Bryn Mawr, Pa., from septicemia.

Wiley H. Young, Clinton, S. C.; Atlanta Medical College, Atlanta, Ga., 1887; died, May 13, age 63, from cerebral hemorrhage.

Stephen D. Doar, McClellanville, S. C.; Medical College of the State of South Carolina, Charleston, 1860; Civil War veteran; age 85; died, January 29, of senility.

Arthur Magill Buchanau, McColl, S. C.; University of the South Medical Department (Sewanee Medical College), Sewanee, Tenn., 1904; member of the Tennessee State Medical Association; died suddenly, November 5, age 41, from acute dilatation of the heart.

L. Theophilus Hill, Abbeville, S. C.; University of Maryland School of Medicine, Baltimore, 1882; member of the South Carolina Medical Association; also a druggist; age 70; died, December 26, from cerebral hemorrhage.

Benjamin F. Few, Greer, S. C.; Medical College of the State of South Carolina, Charleston, 1861; Civil War veteran; also a druggist; age 93; died, January 21, from senility.

Simon P. Rentz, Branchville, S. C.; University of Maryland School of Medicine, Baltimore, 1891; died, March 22, when the car in which he was riding overturned and his neck was broken.

James J. Wingard, Lexington, S. C.; University of Virginia Department of Medicine, Charlottesville, 1895; age 58; died, December 4.

Theron Earl Roe, Tigerville, S. C.; College of Physicians and Surgeons, Baltimore, 1910; died suddenly, May 11, age 34, from cerebral hemorrhage.

These my friends have fought a good fight and we believe they kept the Faith, and are now enjoying the rest and the blessing promised to such:

"And they no longer weep,
Here, where complaint is still;
And they no longer feel
Here where all gladness flies;
And, by the Cypress
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The Journal OF THE South Carolina Medical Association

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GREENVILLE, S. C., DECEMBER, 1923

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CONTENTS

EDITORIAL DEPARTMENT:	
Greetings Retrospect	659
ORIGINAL ARTICLES:	
The Newer Physiology of the Capillaries by Dr. J. Van de Erve, Charleston, S. C.	660
A case of Haemophilia In a Negro by Julius H. Taylor, M. D., Columbia, S. C.	665
Osteo-Chondritis Deformans Juvenilis by W. A. Boyd, M. D., Columbia, S. C.	669
All Legitimate Progressive Scientific Medicine and Surgery by D. M. Crosson, M. D., Leesville, S. C.	676
Gradenigo's Syndrome: With Report of Cases by M. R. Mobley, M. D., Columbia, S. C.	679
Some Things the People Should Know About the Regular Medical Profession Versus Quackery by Dr. L. O. Mauldin, Greenville, S. C.	681
UROLOGY DEPARTMENT	686
SURGERY DEPARTMENT	687
SOCIETY REPORTS	688
MINUTES	689
BOOK REVIEWS	693
CORRESPONDENCE	696

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EDITORIAL

GREETINGS. RETROSPECT

For eighteen years the Journal has shared the Christmas Spirit of the members of the South Carolina Medical Association most heartily. In retrospect the Journal is no stranger to sunshine and shadow, reflecting in this regard the experience of many of its readers. Of those who guided the Journal in those far off early years most of them are still living and in active practice.

In this time the whole picture of Medical Journalism in America has undergone a remarkable transformation. The proprietary Journal like the proprietary medical school has almost disappeared with its commercial ideals fostered by questionable ad-

vertisers. This wonderful development has been brought about by the American Medical Association and its incomparable Journal.

The South Carolina Medical Association numbers few more than it did eighteen years ago, but from an unorganized mass, has grown a smoothly running Scientific Society doing a high grade of work year in and year out, always advancing and keeping abreast with any other section of the country.

We feel that in a material way the profession in South Carolina will enjoy the holidays this year more than has been the case for some time. Yes, the doctor's happiness depends on his collections to a considerable degree and it is not beneath his

dignity to smile over the receipt of good fees this year. The Journal rejoices with him. The Journal has prospered. The advertising business has improved over that of any other year since we began to accept only ethical ads. This success would be

impossible without the aid of the Co-operative Advertising Bureau of the American Medical Association.

Finally, doctor, we wish you a merry Christmas.

ORIGINAL ARTICLES

THE NEWER PHYSIOLOGY OF THE CAPILLARIES.

By Dr. J. Van de Erve, Charleston, S. C.

The fundamental importance of the capillaries in the body metabolism has long ago been accented by physiologists. It is in the capillary bed that all the anabolic substances along with gases and hormones, find their way out of the blood capillary lumina into the tissue spaces and thence into the contiguous tissue cells. All the katabolic material in reverse order, enroute to the eliminative organs or as internal secretions passes into the tissue spaces and its fluid, from whence the bulk of the waste matter entering the protruding end-lymph-capillaries, is carried outward by the lymph-current, the garbage stream of the organisms. The smaller portion of cellulifugal substance, notably CO₂, goes into the blood capillaries and on into the venous circulation.

Nutritional alterations for good or ill in the cell—the ultimate unit of the organism—are intricately related to the proper functioning of the capillaries. The purveying fluids of the body are the blood, the tissue liquid and the lymph. The tissue fluid is the go-between, mediating the transmission of all the colloids and crystalloids that enter into the make-up of tissue into its cells and

conveys from the cells all the secretions and excretions, directing them into lymph or blood stream. It stands to reason that capillary efficiency must be profoundly affected by cell conditions and unquestionably obversely, and any aberration from the normal activity of either capillary wall or tissue—and cell membranes must markedly alter the tissue fluid which is far and away the most essential of the three fluids just mentioned.

The very decidedly close interrelationship between capillaries and certain diseases is at once prognosticated.

For years the medical profession has been studying vasomotor phenomena. The epochal and monumental demonstration of vaso-constricting nerves in the rabbit's ear, by cutting the cervical sympathetic and vasodilation fibers in chorda tympani, by that pioneer physiologist Claude Bernard, has stimulated an interest only a little less than the new findings of endocrinology. Since the direct microscopic observation of the capillaries was begun, the concomitant investigation of the skin and its vessels in various diseases has admirably kept apace and abreast.

Conditions of the skin naturally first of all, but also shock, cardiac insufficiency, arteriosclerosis, nephritis, diabetes, aneurisms, acute infections, thyrotoxicoses, vasoneuroses, and dermatographic phenomena have been diligently and fruitfully studied and much and promising headway made for diagnosis and prognosis.

CAPILLARY MORPHOLOGY

The histology of the capillaries has been painstakingly worked out by Dr. Sabin of Johns Hopkins and her conclusions are now almost universally accepted.

Following Dr. Sabin's description, a capillary may be defined as a bare endothelial tube, very delicately functioning for the transmission of food stuff, hormones and waste to and from the tissue spaces which are adjacent to the tissue cells. Nerve fibers run along these tubes and, though not histologically demonstrated, doubtlessly make connections therewith, so that vascular capillaries are, on fairly convincing grounds, believed to be supplied with nerve filaments. The evidence for the innervation of the lymphatic capillaries is much more conclusive. In the larger vessels we have both motor and sensory nerves, but in the capillaries only the vasoconstricting fibers have been found.

The capillaries differing enormously in length and size, as is well known are interposed between the arterioles and venules, but where the former end and the latter begin has been furiously debated. And of course at the out-set it must be admitted that the exact point of structural change cannot usually be demonstrated; but as a working basis it may be stated, and is now generally followed, that, passing peripheralward from a larger artery, the outer adventitious coat is lost first, then the connective tissue layer between the muscle and endothelial coat is shed, at which juncture begins the arteriole, which in turn, denuded of its muscle cells fades away into a capillary or capillaries. The venule, into which one or more capillaries empty, gradually (though it must not be forgotten we are dealing with microscopical distances) assumes its distinctive features by first taking on its connective tissue—and farther centralward its muscular coats.

An item of consuming interest is the attempt made to demarcate sharply a point where the so-called arterial capillary termi-

nates and the venule capillary originates. The histological characteristics of the capillaries being uniform, the distinction has no structural significance; but, if demonstrated, might be of very great functional importance, incisively localizing the exact point where the arterial changes into venous blood. It is the nature of the case that must be a variant because of various and widely varying cellular demands and cellular output.

METHODS OF INVESTIGATION

As far back as 1865 Stricker of Vienna studied capillaries in the nictitating membrane of the frog and noticed by appropriate stimulation that they disappeared from view to reappear when the stimulus was withdrawn.

But the biggest advance was made by Lombard of Ann Arbor, who in 1912 invented a procedure that makes it microscopically practical to study by direct vision at once the morphology, function and pathology of capillaries and adjacent structures specially in the human skin. Lombard placed a drop of glycerine on the skin, preferably at the base of the nail, illuminated the field with a Nernst lamp and examined the area with a binocular microscope, having a magnification of 10-25.

Later investigators have highly developed the technic and achieved correspondingly better results, employing all the known physiological methods such as the electrical current, galvanic and induced, application of various drugs and chemicals and heat and cold, operative procedures, section and degeneration of nerve supply, mechanical stimulation, etc.

FINDINGS

Without any dissenting voice all students of capillary activity have independently arrived at the conclusion that the physiology of the capillaries and the venules demands revolutionary reconstruction and that our theories of peripheral resistance, so far exclusively assigned to the arterioles, because

supplied with nerve and muscle elements must be entirely recast.

Capillary dilatation and contraction are not merely nor mostly dependent on rise and fall of blood pressure, with its four or five controlling and regulating factors.

Beyond any reasonable doubt it has been established of late and may be succinctly stated that capillaries possess to a highly developed degree independent irritability and contractility through nervous and chemical control.

Hitherto, capillary dilation was explained in terms of a rise in blood pressure brought about by a lowering of pressure in the arterial branch or a raising of pressure in the venous side of the vascular tree—in both cases a volumetric change bringing a larger amount of blood as influx or reflux into the capillary bed, which passively widened. Constriction in the arterial and widening in the venous vessels would contract capillaries to original size.

Krogh (Journal of Physiology 1919 LII, 457) has pretty conclusively proven that arterial pressure does not appreciably affect capillary size—venous pressure may and does. If, he argues, arterial tension alone is responsible for the functioning of capillaries in any tissue, the capillaries of larger size and least resistance would monopolize the blood stream, and the blood would invariably flow through the same definite channels, distribution of gases hormones and nutrient material would be unequal and unfair, the cells lying in proximity to these particularly favored capillaries would be over-supplied and others farther away relatively starved—(a condition avoidable only by supposing all capillaries to be of the same size and length, resistance and functional activity, a supposition contrary to and a theory wholly at variance with easily demonstrated facts.)

Stricker (Vorlesugen, Wien 1883 page 675) removed the nictitating frog membrane from the eye, depriving it thus of its blood supply and yet dilation of the capil-

laries still took place under appropriate manipulation.

Roy and Brown (Journal of Physiology, 79-80, 11-323) tell us that in hyperemia, sequential to temporary anemia, the dilated capillaries remain expanded, though the internal pressure is only slightly higher than zero.

Under direct observation stoppage of flow in one capillary often is paralleled by a rapid current in an adjacent capillary though both receive their supply from the same arteriole. Moreover, strikingly enough, the flow in two such contiguous capillaries may be reversed where no alterations take place in the supplying arteriole. Some force distal to the arteriole, and, by other experiments it is also ascertained, proximal to the venules must account for this unusual phenomenon.

Krogh quoted above in another experiment presents evidence beyond the peradventure of the question-mark that capillary dilation is not due to blood pressure. He demonstrated that capillary caliber is significantly and pronouncedly less in resting than in active tissue. He studied thin muscles of living frogs and guinea pigs, injected india ink intravenously, then killed the animal to determine in which capillaries it had penetrated. In resting muscles few capillaries were found visible; in contracting muscles capillaries were wide open. The pressure in the arterioles of a contracted muscle would need to be several times higher than blood pressure calculations can mathematically and physiologically permit. Krogh was convinced that capillary dilatation and contraction are quite independent of blood pressure and capillaries have inherent and intrinsic power to enlarge and show constriction tonus.

That capillaries are contractile, though having no muscular wall, need offer no insuperable difficulty. Amoeba, leucocytes and lymphocytes change their shape with chemical stimuli and alteration in surface tension. Just what the mechanism, productive of changes in size of the lumen in

capillaries is, awaits further investigation. It may be mediated by perivascular or spindle cells as Steinach and Kahn hold. Far more likely capillary contraction is occasioned by turgescence of endothelial cells making up the capillary wall, under nervous or chemical stimulation. This swelling of the cell bulges it out, encroaching thus on the lumen and at the same time by stretching tense the cell membrane so thins out the capillary wall that it becomes invisible.

Broadly stated nervous stimuli contract capillaries while chemical stimulation both contracts and dilates them, mainly the latter. Very probably too nerve regulation is extensive in character, correlating the whole or widely separated portions of the body, while chemical control is intensive in nature, elicits only local responses and plays upon the capillary tone maintained by nerve-action.

ELECTRIC STIMULATION

Capillary response to the electric current (the induced far more effective than the direct) is definite and, if critically localized, wholly independent of arterioles or venules.

Stimulating the sympathetic ganglia or the peripheral end of sciatic nerve always contracts the capillaries in frog's web, so that a capillary of 17 micron diameter after an interval of 5 to 10 seconds is reduced to 11 micron. A fall of arterial pressure even down to zero only alters the size of capillary diameter negligibly therefore the effect of a sympathetic stimulus must be direct.

Cutting the sciatic produces very marked vasodilation and unusually high blood pressure in capillaries, but in spite of this the application of an electric current directly on the capillaries contract them.

Tsang G. Ni in the physiological laboratory of the University of Michigan gave the most convincing proof. He so focussed the electric stimulus through a fine platinum needle at a single sharply defined

point in the capillary that he evoked the most striking phenomena of corpuscular movement due to a very highly localized narrowing or blocking of the lumen—occasioned by the turgescence endothelial cell. (See chart).

Capillo-constriction of a single capillary can be demonstrated by the proper electric manipulation.

ACTION OF CHEMICALS

The response of capillaries to chemicals and drugs applied locally or given systematically may open a field of promising therapy. Some chemicals dilate others contract.

O tension seems to contract the capillaries, CO₂ on the other hand distinctly dilates them. Lister explains asphyxia congestion of lungs on CO₂ basis.

Locally applied adrenalin contracts both arterioles and capillaries; pituitrin contracts the capillaries not the arterioles, has a longer latent period and its effect is of far longer duration. Amyl nitrate (Carrier, *Journal of Physiology*, Aug., '22) produces a very rapid stream in the capillary bed—but dilates the capillaries only slightly and therefore doubtlessly expresses itself in the arterioles as well.

HISTAMINE AND SHOCK

The effect of histamine has assumed a very practical significance in view of its demonstrated relationship to traumatic shock.

The overshadowing symptom in shock is the sudden and pronounced fall in blood pressure which must be accounted for either in lessened volumetric out-put by the heart or lowering of peripheral resistance. Crile mistakenly believed the latter the responsible factor but a large number of investigators have demonstrated oligemia to be the responsible agent. The arterioles are constricted in shock. Vagus paralysis has been proven out of the question—the rapid heartrate is not due to that—though in a fast heart the diastolic filling period is ser-

iously shortened and intake much lessened. The force of cardiac contraction likewise is not responsible. The inadequate cardiac outflow is due to diminished influx of blood. Where is the blood? It is conclusively demonstrated to be in the capillary bed.

Histamine—(B. Iminazolyethylamine) obtained by decarboxylation of histadine (the latter one of the most important amino-acids—the building stones of the protein molecule)—acts as a powerful stimulant to smooth muscle when intravenously injected and simultaneously produces a frequently fatal lowering of blood pressure. Dale Macleivr and others, have furnished unsaisable evidence that histamine constricts the artērioles and widely opens the systemic capillaries by local chemical action (not via sympathetic nerves) on the capillaries themselves. A man, to use the well-worn phrase, bleeds to death in his own vessels.

The clinically interesting conjecture is made (Turck of Chicago the first to do so) that surgical shock is oftenest due to rough manipulation of tissue which may set free histamine in the body, and thus induce shock—much aggravated by ether anaesthesia—little by NO₂ which for that reason is the anaesthetic of choice. Recently Ranson, Faubion Ross (of the anatomical department of North Western University) have reviewed this whole subject and in the main confirmed the conclusions drawn but assert it is not a capillary endothelial poison.

DERMATOGRAPHISM

The phenomenon of dermatographism is supposed to be diagnostic of vasomotor instability; in advanced form, an angeoneurosis.

The latest work in this direction indicates that the red "tache" is certainly due to mechanical stimulation of the underlying capillaries, not via the sympathetic nerve supply. The white "tache" may be nervous or mechanical, more probably the latter.

Ryan (Quantitative Measurement of General Fatigue Am. J. P. 1918, 45) applies this test as a criterion of fatigue. Cotton, Slade and Lewis and Briscoe have made good use of this phenomenon in the cases of irritable heart exhibiting local asphyxia, due they say to capillary stagnation. The rapid diffusion of O from capillaries to tissue occasioned by engorgement of capillaries in turn due to venule constriction is the first recorded instance of independent venule activity.

CAPILLARY PRESSURE

Many ingenious instruments have lately been devised to measure capillary pressure. The Danzer Hooker apparatus (shown here today) works fairly well, but in the nature of the case is limited in its usefulness as all blood pressure mechanisms are.

The correlation of functional activity of the vascular system with the capillaries in the delivery of blood to them, if accurately ascertained, is of diagnostic value.

Leonard Hill (British Medical Journal May, '21,) assures us that with delicate instruments he has actually measured both the diastolic and systolic capillary pressure under microscopic observation.

He keenly differentiated thus: Capillary pressure I take to be that pressure which just begins to lessen the flow in those capillaries wherein the flow is slowest. Diastolic pressure is that which just arrests the onward flow in the capillaries in diastole; systolic is complete stoppage.

CONCLUSION

All the facts of independent irritability and contractility so far scientifically established, seem to prove that the activity of the capillaries is quite opposite to that of the arterioles, that they cooperate with the venules and are the most vital elements in maintaining, with infinitely delicate precision, that balanced and nicely articulated and coordinated response in every cell, tissue and organ so indispensable to the economy and healthy functioning of the organism.

DR. W. F. R. PHILLIPS (Charleston):

It is historically worth while to mention the fact that about one hundred years ago—in 1825—Dr. James Black of London published the first work on infection (?) of the capillaries, and while his experiments were somewhat crude and not altogether convincing to himself, it is interesting to know that he seems to have reached the conclusion at that period that is being reached today, and that is that the heart's action has no control over the capillaries, that the capillaries control themselves.

It seems strange that in such a long time we have not gone back to the embryological point of view. The blood vessels first develop as capillaries with a single cell wall. These blood vessels controlled and moved the blood stream in the embryo before there were any walls. Therefore, if they moved embryologically why should they after they get into the adult suddenly lose the power of contractility and of moving? They have

not lost it. That is the observation of anyone who painstakingly studies the capillaries.

Anyone who tries the simple experiment of injecting the capillaries will find that they are very irritable and that they will resist injection. In fact, if one wishes to make complete injection of the capillary blood vessels he must let the tissue die before he can get complete injection. If he injects fresh tissue he will fail.

Many years ago the position of the capillaries in the economy was observed. Luenbeck made the observation that it was in the capillaries that tissue changes went on, and in 1831 M. Hall published the first and best account of the relationship of the capillaries to the blood vessels. He said that the arteries tended to divide and divide and get smaller and smaller; the capillaries tended to divide and unite and remain the same size, and the venules tended to unite and unite and get larger and larger. I do not know of a better definition of the capillaries than that.

A CASE OF HAEMOPHILIA IN A NEGRO

By Julius H. Taylor, M. D., Columbia, S. C.

In the Ninth Edition of Osler & McRea's Practice of Medicine, we find it stated that Bullock discredits the reported cases of haemophilia in the negro and, further, the monograph of Bullock & Fields is cited as a model for accuracy of observation and of investigation. We, therefore, believe the following case of haemophilia presents a sufficient interest to render it worth reporting.

J. P., a negro man, was first seen by us November 15th and on November 21st, 1921, entered the Good Samaritan Hospital. Farmer, single, twenty-four years of age.

FAMILY HISTORY: Father fifty years of age, in good health; mother, forty-five years of age, in good health. One maternal uncle bit his tongue in falling and bled to death; one maternal aunt had a nine year old

boy bleed to death following the pulling of a tooth; another maternal aunt had a son giving a history of profuse bleeding from slight skin injuries but died from other causes; still another maternal aunt had a boy twelve years of age who has frequently bled, especially from the nose, until he was much weakened; a maternal female first cousin lost a boy at nine years of age from hemorrhage following the pulling of a tooth.

Patient had eight sisters and four brothers. One brother bled to death following the removal of an eye, at the age of three weeks. The eye shortly after birth began to become more and more prominent finally resting on the cheek, the mother says, and upon removal it was found to have a large clot of blood behind it. Two other brothers died with no symptoms of being bleeders. The fourth brother still lives at the age of eight and does not bleed abnormally. None of his sisters have exhibited any bleeding tendencies. A son of one of his sisters bled to death

at the age of one year from biting his tongue.

PERSONAL HISTORY: Measles, mumps, whooping cough and malaria; influenza in 1919; never had any operations; negative venereal history; habits—good. From early infancy it has been noticed that he bled excessively from slight injuries. In pulling one of his first teeth, he bled to such an extent that the doctor would allow no subsequent ones to be pulled. When two years of age, he jumped from a table, striking his left knee, shortly thereafter his knee began to swell and became very large and tight. Later it was lanced twice by his physician and his mother claims that a large quantity of “blood and corruption” was evacuated. He was invalided four months as the result of this. Throughout his life it has been noted that blows on his body were followed by tumors, which lasted from one to three weeks. Thirteen years ago, patient stuck a piece of cane in the sole of his right foot from which laceration he bled for about a week, becoming so weak that he was once found in the yard where he had fallen. He has frequently had slight cuts from which there was slight excessive bleeding.

PRESENT ILLNESS: In March, 1921, he stuck his left thigh on its anterior outer aspect just above the knee. This area soon swelled to the size of an orange with a discolored area in the skin. This tumor slowly became smaller but did not entirely disappear. In July, 1921, it began slowly to increase in size and continued to do so until it now occupies the anterior outer aspects of the thigh from the knee to its middle. The patient has continued to work but has found it increasingly difficult on account of interference with flexion at the knee and recently has been suffering a great deal of pain in using the leg. He entered the hospital for relief from the pain and swelling which incapacitated him for his work as a farmer.

PHYSICAL EXAMINATION: A

well-nourished vigorous looking negro. Skin and mucous membranes negative; glandular system and reflexes negative; no tumors elsewhere about the body; teeth in fair shape; heart, lungs and abdomen normal; systolic blood pressure 120 mm, diastolic 80 mm. Occupying the lower half of the anterior outer aspect of the thigh is a large semielastic swelling. Definite fluctuation cannot be elicited, nor is there any change in temperature; there is a slight pain on pressure. This tumor permits flexion of the leg on the thigh of only about fifteen degrees. Beyond that it is painful and will not go. X-Ray picture would seem to show just above the lower end of the femur on its anterior outer aspect an irregular shadow suggestive of an injury to the periosteum. An aspirating needle introduced over the softest part of the tumor withdrew dark thick blood. Urine negative; Wassermann negative. This blood taken for the Wassermann at noon had failed to clot at 6 P. M. By the next morning there was only an incomplete clot formed. There was no clotting in a one millimeter tube in twenty minutes, at the end of which time the tube was used up. On November 21st, his blood was typed with that of his father and sister and all found to be type four. On this date he was given by indirect transfusion 40 cc of citrated whole blood from his sister whose clotting time was normal. On November 26th 40 cc of citrated whole blood was given from the same sister by indirect transfusion. November 29th, 40 cc of citrated whole blood was given by indirect transfusion from the father. The father's blood had a normal clotting time. On November 30th, the patient's coagulation time in a one mm tube was four minutes; in a one cm tube nine minutes. December 4th, 40 cc of citrated whole blood from the father given by indirect transfusion. On December 7th, the patient's coagulation time in a one mm tube was three and a half minutes. On December

9th, under ether anaesthesia a $2\frac{1}{2}$ inch incision was made over the most prominent point of the swelling. Here a thick dark fluid blood was encountered about one half inch under the skin surface, and occupying the space between the bone and the muscles of the anterior thigh was a mixture of thick fluid blood and organized clot. With the gloved finger this clot was gently fragmented and most of it removed. It was noted that the blood seemed to clot normally on the dressings but the time was not observed. The cut surface of the skin and subcutaneous tissues bled continuously and were bleeding when the dressings were finally applied. A light gauze packing was placed in the cavity and a firm bandage applied. Three hours later the dressings were so saturated with blood that they were removed and fresh dressing re-applied, followed by a very firm bandage. This slow bleeding continued and at 10:00 P. M. he was given 30cc of untested blood subcutaneously obtained from a colored nurse. This seemed to have no effect whatever and on December 12th, all packing was removed from the cavity and fresh packing re-inserted very tightly, followed again by bandaging as firmly as the tissues would allow. On the 12th, too, his temperature in the afternoon went up to 104 and his pulse to 135. On the 13th, the wound was evidently badly infected though the oozing of blood from the cut skin surface continued. The use of Dakin's solution was instituted through tubes in the original incision. The man became weaker and more evidently septic. On December 14th, he was given 80 cc of citrated whole blood from his father with no evident effect and on December 16th, the patient died.

With this striking family history of male bleeders transmitted always through the female and with this history of bleeding from early infancy there can be no doubt of this being a genuine case of haemophilia in a negro.

This man was dark brown in color with typical features, though his mother is evi-

dently strongly tinctured with white blood, a copper colored mulatto with features little suggestive of a negro. His father is the same type and color as the patient. Both parents, from whom, together with the patient, this detailed history was gotten, are unusually alert and intelligent. The patient had always lived with them and we believe this history to be accurate.

When one ponders the fact that not all the elements concerned in the clotting of normal blood are clearly understood, the uncertainties concerning the coagulation of abnormal and pathological blood is not to be wondered at.

As a basis for a clearer understanding of the more plausible theories advanced to explain the delayed clotting of haemophilic blood, permit us to briefly state first Howell's theory of normal blood clotting, which satisfies best the known facts based upon experiments. Bernheim in his monograph on Blood Transfusion, states that Dr. W. H. Howell of the Johns Hopkins University has probably done more work in this field than any other investigator. As stated by G. W. Whipple, this theory holds that there are five factors concerned in the clotting of normal blood, namely,—prothrombin, antithrombin, thromboplastin, fibrinogen and calcium. All of these elements, except thromboplastin, are present in circulating blood. Within the blood vessels, prothrombin is held in combination with antithrombin and intravascular clotting is thereby prevented. When, however, blood is shed the antithrombin is neutralized by the thromboplastic substance of the tissue juices (blood cells, endothelial cells, platelets, etc.). The liberated prothrombin now combines with the calcium and the thrombin which results converts soluble fibrinogen into the insoluble fibrin or the clot.

With this as a basis of his studies, Howell first proved that as compared to normal blood there is a most marked delay in the spontaneous coagulation of haemophilic blood and that the deficient coagu-

lability was due to some permanent alteration in the properties of the blood. These deficiencies devolve themselves finally into an actual subnormal amount of prothrombin in the circulating blood, and since anti-thrombin was proved to be present in normal or slightly subnormal amount, Howell concluded that "the essential condition in haemophilia, which is immediately responsible for its delayed coagulation is a subnormal amount of prothrombin in the circulated blood". He therefore says "haemophilia may be defined as a condition limited to the male in which the coagulation time of the blood is immoderately prolonged in consequence of a deficiency in the amount of the contained prothrombin with the additional characteristic that the defect is transmissible by heredity in accordance with the so-called law of Nasse."

On the other hand Sahli has suggested that the disease was due to a disturbance in function of the walls of the blood vessels only, whereby the secretion of thromboplastin or a similar substance which normally is secreted when the wall of a blood vessel is cut or otherwise injured does not take place. Clotting in the end of the cut vessel therefore fails to occur. It takes place elsewhere however, when the blood comes in contact with the prothromboplastin from other tissues.

The literature to which we have had access would seem to indicate that workers in this field generally accept Howell's as the most tenable explanation.

The work of Minot & Lee seems to show that the blood platelets play an important role in the coagulation time of the blood. In haemophilic states they find that their contained prothrombin and thromboplastin for some reason is not available. They

have shown that normal platelets added to haemophiliac plasma initiates prompt clotting, whereas haemophiliac platelet added to haemophiliac plasma in many times the concentration on which normal platelets were added to haemophiliac plasma only caused a much delayed clot.

Whatever the element or elements needed the transfusion of whole blood from a suitable donor will best supply this deficiency. When transfusion is not available in the presence of a bleeding haemophiliac not controlled by pressure, there may be tried the injection of foreign serums, the infiltration of the surrounding tissues with human whole blood or the dropping of whole blood on the bleeding site as done by Sayer.

Finally, there are two features of the haemophiliac to be borne in mind as mentioned by McLean. First, that in the presence of a moderate hemorrhage the time of clotting shortens, called by E. A. Wright, who first drew attention to this characteristic "hemorrhagic increase in the blood coagulability". Blood tested at this time may coagulate as promptly or nearly as promptly as normal blood. Owing to this fact, the haemophiliac may have many excessive bleedings with spontaneous cessation even in the absence of treatment before the final one that takes him off.

Second, McLean quotes Addis as reporting that the blood coagulation time may vary from day to day in the inter-hemorrhagic periods. In one of his patients it varied from 38 to 80 minutes and in another 50 to 90 minutes. Therefore, definite conclusions as to the coagulation time in individuals showing a bleeding tendency should not be based upon one test.

OSTEO-CHONDRITIS DEFORMANS JUVENILIS

A Review—Report of Cases

W. A. Boyd, M. D., Columbia, S. C.

This most interesting disease of the hip joint was first called to the attention of the medical profession by Legg, of Boston, who reported four cases of his own, and one of Goldthwaite. Subsequently Calve on July 10, 1910, published an article in the *Revue de Chirurgie* recording ten cases. In 1913, Perthes reported cases of this condition and suggested the name "deforming osteo-chondritis of the superior extremity of the femur." Since then various men have recorded their cases, and suggested a name for the condition: "Quiet hip disease," "Pseudo coxalgia," "coxa plana," "osteo-chondral trophopathy of hip joint," etc. The condition, however, is most spoken of as "Perthes disease," notwithstanding the indisputable facts that both Legg and Calve preceded Perthes in writing of the condition.

The disease itself is a deforming affection of the upper femoral epiphysis.

1. The etiology of this diseased condition is still a subject of discussion, and while Legg in his original publication seemed to consider *traumatism*, with resulting circulatory changes as the probable cause, other writers have advanced various factors as the immediate and I might say predisposing cause.

2. *Phemister*, reporting the pathological findings of a case operated upon by him is inclined to consider that the findings strongly indicate the infectious origin of the disease, although he did not obtain any definite evidence.

3. *Legg* and *Kidner* have each reported a case operated upon, and the broken down focus from the neck of the femur showed a *staphylococcus aureus* infection upon being cultured. *Kidner* believes that the

process is primarily a sub-epiphyseal nematogenous infection of the neck, which interferes with the circulation of the head of the femur.

4. *Blanchard* says that he has not been able to locate a tonsillar or other source of infection in a single case.

5. *Freiberg* suggests that the disease is of a secondary infectious origin, and does not think trauma is a causative factor.

6. *Davis*, (G. G.) was of the opinion that traumatism was a factor, also some constitutional cause.

7. *Roberts*, writing in the *Journal of Orthopaedic Surgery*, 1919, reports eight more cases occurring in his practice, and is more convinced that syphilis is an ethiological factor, all of his cases improving under antiluetic treatment, and while they gave negative Wassermanns, they all gave evidences of inherited syphilis.

8. *Fenner*, in reporting his cases, states that he has been unable to find any evidences of inherited syphilis, all of his cases giving a negative family history and negative Wassermanns.

The cases occurring in my own service have also failed to give any evidence of inherited lues.

9. *Michelson* does not believe the cause is of an inflammatory nature, that it is of a nutritional or vascular origin rather than traumatic; while *Roderick* (21) stresses the view of traumatism as the cause.

10. *Soderlein* attributes the condition to some anomaly in the upper end of the femur, and this entails, or is supplemented by some developmental disturbance, possibly an abnormal ossification of one or both of the epiphyses.

11. *Moller* feels that as the affection does not spread, it seems probable that it may originate in some nutritional disturbance in the region. Some lesion of an artery interfering with the normal blood supply.

12. *Perthes* says that the trouble is a destructive process in the interior of the

head of the femur, and the joint is not affected. The cause seems to be some disturbance in the nourishment of the head of the femur, probably from some injury to the artery supplying it, possibly of traumatic origin.

13. While Higman reiterates that the trouble is some dystrophy of the head of the femur, and urges that the affection should be known as "osteo-dystrophy of the hip joint," rather than osteo-chondritis, as all agree that there is no inflammation. He proposes the term "osteo-dystrophia coxae," as expressing the true nature of the affection, that either primarily or in consequence of some extraneous circumstance, the upper end of the femur has failed to develop properly.

14. *Digitals* does not regard tuberculosis, the infectious diseases, or trauma as pathological causes, but that the origin of the disease must be looked for in a congenital alteration, either of the epiphyseal cartilage of the upper end of the femur, or of the epiphyseal nucleus, which gives way to processes of ossification which are insufficient and irregular.

15. *Mouchet* regards the condition as a growth osteitis of the epiphysis, a minor degree of deforming arthritis of the hip joint, while *Zaeger* says that owing to some congenital dystrophia, some developmental defect in the ossification center of the head of the femur, the part does not develop quite normally for a time, but finally as growth proceeds, the condition rights itself. That anatomical studies of cases have confirmed his assumption that the developmental defect is mainly the interposition in the ossification center of irregular islands of cartilage, and that it may occur with or without trauma.

16. *Murk Jansen*, writing in the *Journal of Orthopaedic Surgery*, says that later publications have confirmed his view "that a congenital latero-position of the femoral head, associated with due preservation of

the acetabular roof and its rim, was the primary cause of Legg's disease."

"(a) Though congenital in its primary cause, develops only after some years of walking, the neck must be widened out before the characteristic flattening and clearance will occur.

"(b) That coxa plana is often seen to develop a short time after infectious diseases have been sustained; the injurious agents have temporarily enfeebled the power of growth of the bone and contributed to the plasticity of existing bone.

"(c) That signs of local infection are alive to the process."

On the other hand, *Calve*, writing in the same journal a month or two earlier, says:

"1. Osteo-chondritis is not a congenital affection.

"2. That the phase of the invasion of the epiphyseal nucleus is latent from the clinical view point.

"3. That the clinical phase corresponding to the period when the child first begins to complain of pain is considerably later than the real beginning of the trouble.

"4. That to the beginning of the clinical phase there is a corresponding radiographic picture showing an established and characteristic lesion. A laminated and fragmented epiphysis.

"There is an astonishing variance between the radiographic findings and the first clinical manifestation. This variance proves indisputably that the debut of the trouble, whatever its cause—infectious, traumatic, or specific is clinically silent."

17. *Platt*, from a clinical and radiographic study, advances the opinion that the condition is most probably due to definite infection of low grade virulence.

Although in all of my cases there was a definite history of traumatism, and in only two a previous infectious history, one child having had several attacks of pneumonia, and a second hypertrophied tonsils, with a definite family history of tuberculosis, both father and mother having had pulmo-

nary tuberculosis, I do not feel justified in assuming that traumatism with its resulting interference with the blood supply is the true etiological factor, because, after all, as in other bone affections, the trauma may be the predisposing element only, lowering the vitality of the part and thus enabling a low grade hematogenous infection—which the previous resisting powers of the child had held in abeyance—to gain a foothold. Such an infection would in itself interfere with the nutrition of the part. While we have not been able to determine the exact etiology of the condition, these factors can be considered determined; that is:

1. That it is not hereditary, even though *Schwartz*, *Calve*, *Brandes*, *Levy*, and *Eden* have reported cases occurring in more than one member of the family or in different generations. *Brandes* has suggested that in Perthes disease, there is some congenital predisposition towards the development of bony softening.

2. That it shows a definite predilection for the second half of the first decade of life.

3. That more boys than girls are affected.

4. That it is generally unilateral.

5. That the condition may have been in existence long before the clinical manifestation.

PATHOLOGY

The pathology of this condition has generally been discussed from a theoretical standpoint, because of the lack of opportunity to study the diseased tissues themselves, all of the cases going on to recovery. However, *Perthes*, in the discussion of a series of cases of his own, reported his findings in one case he had operated and removed an overgrowth of abnormal cartilage extending down into the fairly normal bone. From this, in connection with his clinical study, he assumed that the disease was a *peculiar* atrophy of the upper epiphysis, brought about by destruction in the sub-chondral region. But this

specimen, *Kidner* says is of little value because it was taken from the joint surface, a region which the X-Rays show to be little affected in osteo-chondritis. *Legg* also reports one case which had been operated and a septic focus curetted from the neck of the femur. He did not believe, however, that the focus was in any way responsible for the change in the head and neck; but from the very frequent history of traumatism in the disease, he concludes that the changes in the epiphysis, sub-epiphyseal region and neck of the femur, were due to an interference in the blood supply, following traumatism at the epiphyseal line..

Since then, *Kidner* has reported his findings of a case operated upon by him, in which a well walled off cavity was opened, and from which was curetted a soft, grayish-red material, suggesting broken down cancellous bone. A culture made from this material showed a staphylococcus aureus of low vitality. *Phemister* in a recent article has also reported a case operated by him, and from which negative cultures were obtained. That, however, does not preclude the possibility or even probability that an infection might have been present.

Kreuter, from a study of a case and from the investigation of *Pommer*, concludes that the condition must be regarded as a type of arthritis deformans and cannot be considered a distinct disease process of the infantile hip joint. He lays particular stress on the fact that it is not a juvenile, but an infantile disease type, and therefore the endo-secretory influence of the still quiescent puberty glands play no part in the development.

Therefore, with the exception of *Kidner's* case, with its cultural findings, we are dependent on the radiographic findings for the pathology, and in that, we are apt to be mislead, because these cases have generally been active long before coming under observation, and we have no way of arriving at any definite radiographic conclusion as to the beginning of the process.

The true pathology must therefore await determination until definite postmortem studies are available, or more cases in the early stage are operated, with subsequent laboratory study of the material removed.

SYMPTOMATOLOGY

The symptomatology of this condition has not been the subject of discussion. All of the writers apparently agree:

A healthy child, more often a boy, suffers some traumatism to the hip joint, and then later begins to limp. It is the limp that usually attracts the attention of the parents. There is slight pain, rarely of any marked degree, which is not surprising when we remember that the disease is one of the ossification center, sub-epiphyseal, which is protected by a thick layer of cartilage and without nerve fibres and does not involve the joint surface. Muscle spasm is absent. No night cries, temperature nil, or occasionally a slight rise to 99 degrees, which when present, is not constant.

Examination of the limb shows elevation of the trochanter and trochanteric thickening, slight atrophy of the thigh, limitation in external rotation and abduction, flexion is not impaired. Trendelenberg's sign is present.

Radiographic findings: A thinning out of the calcium salts in the epiphysis, giving it a laminated appearance, with softening or total destruction of areas in the bone substance of the head, flattening out of the epiphysis, thickening and shortening of the neck and deformity of the head of the femur.

PROGNOSIS

All of the cases, treated or untreated, get well, with always, however, some deformity of the joint.

DIAGNOSIS

It is very probable that many of the so-called cases of tuberculosis coxitis of the earlier writers, that recovered without marked deformity, were in fact cases of osteo-chondritis. While it is of no real importance to the child in so far as future function is concerned, for a case of *Perthes*

to be diagnosed tuberculous coxitis, we must not, as Davis has reminded us, err on the other side, such an error, as you can readily appreciate, would be of manifest detriment to the child's future. *Platt* calls attention to this fact, "When the hip joint is found on examination to be fixed and painless, the position is often one of slight flexion, combined with adduction, in striking contrast to the abducted position of the early tuberculous joint." *Moller* noticed that in his cases of osteo-chondritis the children ran around with their mates and made no effort to spare the leg, even when there was some tendency to pain in it and considered it an important diagnostic sign.

The X-Ray appearances will eventually determine the diagnosis. Other conditions that might be mistaken for osteo-chondritis are: Osteo-myelitis of the hip, juvenile deforming arthritis of the hip, and coxa vara. A careful clinical study and investigation, together with the radiographic findings, should easily determine the diagnosis. In truth, as *Mouchet* says, "Symptoms are nothing, radiography everything."

TREATMENT

The sole object of treatment must be the attempt to lessen the destruction and flattening out of the head of the femur as far as possible. Cases treated or untreated get well, but with more or less deformity of the head and neck of the femur. How is that to be achieved? By conservative measures, such as recumbency, fixation and removal of the superimposed body weight; or should these cases be operated? *Phemister* from his experience is inclined to the operative measures, but warns us, that we should wait until the acute symptoms subside before operating, for fear of setting up an arthritis. If we are to wait until then, why subject the child to any operative risk. The damage has been done, and while it is possible that by operating the final result might be hastened, but not appreciably bettered. I cannot in view of our present knowledge see the advisability. *Platt* says, "Operative treatment directed

towards the removal of the dominant lesion, has no present place in the therapeutics of the disease." Blanchard in his article draws the following conclusions:

2. The head of the bone that continues in functional use during the acute stage becomes (flattened out, or) obliterated, wholly or in part by attrition of body weight or softened bone.

3. The head of the bone that is protected by mechanical support, suffers only the same atrophic changes as the adjacent bones.

4. During convalescence the head redevelops rapidly under mechanical protection, slowly and less perfectly without protection.

Personally, I feel that absolute immobilization of the joint during the early stages of the disease by the application of a long plaster spica, followed later, as the condition begins to right itself, by recumbency and heliotherapy in the young children for a variable period, as determined by the radiographic findings, before weight bearing is permitted, or in older children, after the need of the recumbency and immobilization is no longer apparent, by the application of a short spica and the use of crutches and a high shoe on the unaffected side, will lessen the deformity and future impairment of the joint. The commencement of weight bearing being dependent upon the radiographic findings.

REPORT OF CASE

Case 1.—C. W., male, age 15, white school boy. March 25, 1920—October 26, 1922.

Family history: Negative.

Previous medical history: Negative.

Present illness: Eight weeks ago while wrestling at school he hurt his right hip. Had a little pain at the time which disappeared. Then he began to have a slight limp, with pain in the hip at times. The pain was never severe. A physician was called who diagnosed rheumatism and treated him for six weeks. On March 25,

1920, he was referred to me for treatment, with a diagnosis of tuberculosis of the right hip.

Examination: A general physical examination was negative with the exception of the right hip and thigh.

There was no muscle spasm, and no pain upon jarring the joint or upon movement of joint. There was considerable limitation in external rotation and abduction, no limitation in flexion or adduction. The right thigh was one-half inch smaller in circumference than the left thigh. There was some thickening over the trochanter. During his stay in the hospital under observation his temperature did not go above normal.

Calmette negative. Wassermann negative.

X-Ray examination: Flattening of the head and neck of the femur with thinning out of the head. There was no involvement of the joint surface.

Diagnosis: Perthes disease.

Treatment: Recumbency in a long plaster spica from costal margin to toes of right foot, including the left side of pelvis, cast being carried down over the trochanter of left leg. Cast was worn for a period of six months, then a short spica was applied with high shoe on sound leg and crutches allowed. Six months later all casts were removed and heliotherapy and crutches for another six months.

Results: The boy has a useful limb, practically no limp, no pain or disability. Says he feels as well as he ever did.

Case 2—J. C., white, male, 3½ yrs. old. June 28, 1922.

Family history: Father had pulmonary tuberculosis twelve years ago. Treated in a sanatorium in the Adirondacks for seven months and discharged as cured. Mother also a positive tuberculosis history. Both parents are now well.

Previous medical history: Negative.

History of present illness: About three months ago, began to complain of pain in

leg. Sometimes he waked up at night complaining. On June 25th he complained of pain in his hips, particularly the left hip, and was kept in bed for three days. No record of his temperature was taken by his parents and no physician was called. No definite history of traumatism although child had fallen several times.

Examination: A fairly well developed child, of good color. Heart and lungs negative. Throat negative with exception of enlarged, slightly infected tonsils.

Extremities well developed and no atrophy observed. Some limitation of external rotation and abduction. No limitation in flexion, abduction or internal rotation left of thigh. Child walks with a slight limp, favoring the left leg. No muscle spasm.

Von Pirquet was done and reported negative. Wassermann negative.

X-Ray examination by Drs. Gibbes and Rodgers: "There is slight shortening of the neck of the left femur, with some broadening and flattening of the femoral head, and a slight absorption of bone salts about the center of ossification."

Diagnosis: Perthes disease. Infected tonsils.

Treatment: Child was referred to Drs. Whaley and Caughman for a tonsillectomy, and subsequently a long plaster spica from costal margins to toes of left foot, including entire pelvis was applied. Norwegian cod liver oil, one teaspoonful three times a day was prescribed.

October 3, 1922: Child returned for examination. Has had no pain or discomfort. No temperature. Cast removed.

X-Ray examination by Drs. Gibbes and Rodgers: The head of the left femur shows a considerable absorption of bone salts. Left thigh shows an atrophy of one-half inch. No shortening of leg.

Child sent home to be kept in bed recumbent, and to have twice daily exposure of hip to the sun rays, increasing the period daily until he is exposed during the

entire period of sunlight. Voluntary movements of leg and hip permitted.

October 30, 1922. Child examined. Has had no pain or discomfort. No temperature. Skin of thigh and left hip quite bronzed. Limitation in abduction and external rotation still persists. There has been no weight bearing since last examination.

X-Ray examination by Drs. Gibbes and Rodgers: "General improvement in left hip joint. There is a thinning of the femoral head and neck."

November 28, 1922: Child is walking better. No real limp, but slight awkwardness in his gait. Abduction and external rotation of left femur still limited. No pain, no tenderness, no temperature.

X-Ray examination by Drs. Gibbes and Rodgers: "Shortening of the neck is very marked and there is a distortion of the head with a narrowing of the epiphyseal line. There is a considerable absorption of bone salts, but there appears to be marked improvement since the last examination."

Case 3—S. M. T., girl, white, 6½ yrs. Nov. 4, 1922.

Family history: Father and mother alive and well. No family history bearing on case.

Previous medical history: A bottle fed baby. Marasmic until six months of age, when she reached the normal average size. Did not make any efforts to walk until age of twenty months. Had been under-nourished. Several attacks of broncho-pneumonia and seemed to "catch cold" upon the least exposure. No diphtheria, scarlet or other infectious disease.

History of present illness: About one year ago, child began to complain of pain in her right leg extending from hip down to heel and foot. At times she would not play because her leg pained, but generally she ran around and played with her playmates but with, as her mother noticed, a peculiar limp or awkwardness. In May

1922, she was seen by a physician, and her parents were advised to take her to the mountains. Just a day before leaving for the mountains the child was seen by the writer, but no opportunity was had for an examination. On November 1, 1922, the child was again seen by the writer and an examination made.

The child apparently was robust and well developed for her age. She presented no evidence of any systemic illness. Throat, ears and mouth negative. Heart and lungs negative.

Von Pirquet negative. Wassermann negative.

Lower extremities: No shortening of limbs. No appreciative atrophy. No limitation in any movements of the left leg. Right leg: No limitation in movements excepting in external rotation and abduction of the hip. No muscle spasm. A feeling of thickening over right trochanter. Gait awkward with a tendency to limp and favor the right leg.

Feet: Long, narrow, and somewhat flat, but no pronation. The right foot was held slightly rigid, but could be passively moved in all directions.

Diagnosis: Weak flat foot, "Perthes disease" (probable):

Treatment: In order to relieve the pain in the foot over the instep and the spasticity, adhesive strapping of foot was done.

X-Ray examination of hip ordered.

November 4, 1922: X-Ray examination by Drs. Gibbes and Rodgers: "There is a slight shortening and thickening of the neck of the right femur. No changes are noted in the joint."

Conclusions: From the clinical history and examination a diagnosis of a probable Perthes was made, which the radiographic findings confirmed. The pain in the foot was undoubtedly due to the spastic weak foot which was relieved by suitable shoe and strapping with adhesive plaster. The limp continued for three or four months, but has now disappeared.

April 6, 1923: Examination does not reveal any impairment of function in the right hip, excepting a limitation in abduction. No limp, no shortening, no pain.

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ALL LEGITIMATE PROGRESSIVE SCIENTIFIC MEDICINE AND SURGERY SHOULD BE GOVERNED BY ONE CODE, AND THERE SHOULD BE BUT ONE HIGH STANDARD OF PROFICIENCY IN THE PRACTICE OF MEDICINE

By D. M. Crosson, M. D., Leesville, S. C.

Having been for years thrown in a legislative way in different spheres from most medical men in our State and Association, I am probably prone to discuss, at times, subjects of a more obtruse nature, to other members of our Medical Association; subjects, apart from the mere discussion of a disease or some surgical case, but I hope you can grasp my idea, not only from a medical and surgical standpoint, but from my legislative experience, and knowing the efforts by quacks and various cults to make thrust from a so-thought legitimate and legislative standpoint, I have been so im-

pressed with the proper relations that legislation should bear to the only one and true system of the practice of medicine and surgery and a proper code governing same, that I am of an unyielding and firm opinion, that, all Legitimate Progressive Scientific Medicine and Surgery should be governed by one high standard of proficiency in the practice of medicine. Other professions do not divide their professions up into sections, or degrees of proficiency—you do not have two or three grades of dentists—nor, do we have two or three grades of lawyers—some of a grade to practice in magistrate courts—some in county courts—some in supreme and federal courts, but when a lawyer is licensed to practice he is considered a lawyer and is entitled to practice in all the courts. They are not licensed by degrees of ability and this should be the standard in the medical profession, and we should not recognize any piece-meal business about it. All branches of our profession, which go to make up our Allopathic and only true scientific system of medicine and surgery,

based on a proper and true knowledge of anatomy, physiology, materia medica, chemistry, surgery and a knowledge of hygienic and sanitary laws, together with electricity, X-Rays and so forth, and should be so worked out by our schools and so standardized, taking all remedial agents and proper methods in which there are any good, or an advancement in our teachings and education. There may be some small items of truth to be picked from any system, but not enough to cause the establishment of a separate profession and we should embrace every noteworthy idea—for instance, as Dr. W. F. R. Phillips suggests, "We should recognize and teach physical exercise", which will be a valuable adjunct to our therapeutics and other things which might be so included.

Our schools and teachings should so recognize and present every known and worthy suggestion and practical idea, that everyone may be in possession of same, and our system should be so broadened and standardized that there will be no necessity for a division of ideas and claims of super-knowledge along any one line, and a proper knowledge of all recognized therapeutic agents, shall be so understood, with such proficiency, that, there will be no necessity for but one high standing professional code of ethics.

During the past session of the General Assembly, there was a strong and persistent effort made to "put over" on us a "blur", an incubus to Scientific Medical Endeavor, a "slur" to *decent high-standing progressive enlightenment* in our Profession. I fought it, it was killed in the Senate.

Then a bill was introduced to divide the Medical Examination Board and give them (the cults) a member or two, on the State Examining Board. This I am unalterably opposed to—you can't *mix oil and water*, and I consider that it will be an everlasting disgrace to us to submit to any such a mixture and coalition. It will not

work, it will be unequally yoked and cause friction. I hope never to see the day when our association and profession will submit to such an indignity, and should such a thing ever be perpetrated by any Legislative enactment, then every member of our examining board should resign and *stay resigned*. We are the "Whole Cheese" or we are nothing, and I believe in standing by our professional rights and dignity and honor. No science was ever endowed with more of the beautiful handiworks of nature of an all-wise God, than is portrayed in the human anatomy and on which is based a grand and wonderful scientific profession, and I will never stand and see her honor trailed in the dust of the unworthy, or her standing brought down to an equal with these inefficient cranks not posted in the proper knowledge of medicine. These inroads on the *true and only correct* and honorable and worthy system of medicine, by which many are making a short cut to success from a mere financial standpoint, are not now springing up, but these "cults" sprang up years ago. Grecian history tells us of their frequent uprisings and disapprovals and disappearances etc., and as early as 1527 Paracelsus, who was of Teutonic origin, and by his false and cranky notions and at variance with all scientific teachings of that day, and over three hundred years ago, was alienated and "kicked out" of their recognized medical profession, and history shows, none have ever heached high attainments. They have never had a code governing their unscientific principles and ideas, and history furnishes no record of any set rules or code, by which they are governed, and as there is but one code, all who expect to obtain proficiency enough to be recognized as an enlightened practitioner, should be required to comply with our methods of attainments and to come under our rules and regulations and be so governed.

The *legitimate* and *recognized* Allopathic system of Medicine and our profession is

now confronted with such unprofessional onslaughts, that history presents no parallel to such a record, but we should not despair, nor be daunted. Disaster is not written in our vocabulary. There will be no "Granpian Hills" in our system of Medicine, like in old Scotland over which the Highlanders and the Lowlanders would pass to slay each other. The Common Weal, Professional Advancement, and High Standard with Public Pride, will be a future delight of all our people, and there will be a burning cry to elevate the Scientific practice of Medicine and Surgery to *one high plane* and all shall be governed by *one and only one honorable and recognized code of ethics*.

MOVE ON, LET PROGRESS BE OUR MOTTO

The public and the world will not be satisfied with men of but one idea, but will demand broader minds. We will yet see bright stars shining through the clouds in our professional horizon and a halo of light around about us.

DR. MARION H. WYMAN (Columbia):

Some of you were not here at the meeting of the House of Delegates last night when this subject was thoroughly discussed. It is certainly a most worthy paper and an ideal time to present the subject, because before, we have put it off until the Legislature met and then tried to counteract the chiropractors. This second bill Doctor Crosson mentions was put in by a man on our side, and last night a committee was appointed to handle the situation, so I feel sure we shall cut off the chiropractors next year.

DR. W. P. CORNELL (Columbia):

I would like to add that the plan which seems the only feasible thing is for each individual physician to use his influence with his legislator at home. To wait until they get to Columbia and then have the Columbia physicians and the medical society go there in a body, will not do the work. You must know your own legislators personally and have them know you. The influence must be exerted on them from you at home. The idea is for you to get out and hustle from now on, because this bill is at the third reading and ready to go through and put a chiropractor on the medical board. We

must beat that before next January. Every doctor should go out among his patients, especially those who have been treated by the chiropractor and not benefitted, and get affidavits from them against the chiropractor. Hundreds of affidavits were presented before the Legislature from people who claim they were helped, and the legislators held up a sheaf of these and said, "Here we have evidence from the chiropractors, but not a single word of evidence against them. We must have written proof against the chiropractor." With that and Doctor Phillips' papers, I believe we can once and forever squelch them.

DR. ERNEST COOPER, (Columbia):

One method of attacking the chiropractor has been adopted by Doctor Epps of Sumter, in which he has written a series of articles for publication in the newspapers. I have read one or two of these articles, and I would suggest that steps be taken to have them published in all the county newspapers throughout the State.

DR. M. H. WYMAN: Those who are in close touch with the situation have decided that we do not want too much publicity unless it is started from some central body that have worked out the plan definitely, because the news will spread that we are persecuting these fellows. I would suggest that that be left to the committee.

DR. J. E. EDWARDS, (Darlington):

We had a meeting and served a supper and invited our Representatives and stated the question to them, and it seemed to have its affect, as Darlington County voted unanimously against the chiropractors. One of the Representatives from another county that I happen to know said that he had at least ten telegrams sent to him about one hour before this vote came up, from people who had been treated by chiropractors, asking him to support them, but not a single word from the medical profession.

DR. W. P. TIMMERMAN: Some of our most enthusiastic men are advocating giving these people recognition—requiring that they pass the same examination as other people and make them proficient. It is doubtful propriety to say you must not give them any recognition. A compromise should be made. There are those who work just as hard for this Association as we do who think it is not wise to be too hard. I commend Doctor Crosson's paper, although I do not agree with him fully.

DR. D. M. CROSSON (closing):

You may just as well turn the thing loose and give them a place on the Board as that. I have been up against this thing in the Legislature. I know what it is. I warned you last year and told you what was coming. It took a hard fight in the Legislature on both Houses to keep it down. We finally killed the thing in the Senate last year, and after all this, then some of our men who ought to be loyal to us go back and say, "Well, we will give them a member or two on the Board." This is continually creeping up, and you had just as well hit it in the head and kill it now. I do not intend

to spend all the force and energy and influence I have eternally trying to hold the thing down. I will hit it a blow and kill it if I can. I do not propose to see the profession that I honor and have fought for and worked for for forty-three years trailed in the dust. So long as I represent you in the Senate of South Carolina I intend to fight this thing. You must get behind your Representatives and let them know that you are going to protect your own interests and professional rights. I have not much respect for any man who would compromise with any of these cults, and I never intend to do so.

GRADENIGO'S SYNDROME; WITH REPORT OF CASES

By M. R. Mobley, M. D., Florence, S. C.

This symptom complex or syndrome was first described by Gradenigo in 1904 and later in 1907, and is characterized by three main symptoms; (a) an acute otitis media, (b) isolated paralysis or paresis of the abducens nerve of the side corresponding to the diseased ear, and (c) intense and extraordinary persistent pain, localized, not as ordinarily in the mastoid region, but in the frontal, temporal, and parietal regions of the same side corresponding to the area supplied by the fifth nerve.

The Pathology of the condition consists in an invasion of the cells of the apex of the petrous pyramid of the temporal bone, with a subsequent involvement of the dura over the tegmen of the mastoid in a localized basilar pachymeningitis. In most instances recovery follows. However, a diffused meningitis may occur, ending fatally. We are thus brought to the conclusion that the paralysis of the abducens in this disease is the first evidence of a meningitis, otogenic in origin, which in certain cases ends in recovery and in others resulting fatally.

The following is a report of two cases: The first occurring in my experience while

on duty as Chief of the Eye, Ear, Nose and Throat service at Camp Jackson, S. C.

Private S. L. R., age 21, admitted to hospital February 9, 1921; convalescing from measles. Complained of pain in and back of left ear for the past few days with the development of a "knot" back of the ear, with a subsequent purulent discharge from this ear. A simple mastoidectomy was done on February 10, 1921. The mastoid wound continued to discharge, and when patient came under my observation April 1, 1921, he was suffering from intense headache over frontal, parietal, and temporal regions, left, and had developed a paralysis of the left abducens nerve. X-Ray of both mastoids showed a highly pneumatic bone with a haziness and loss of cell detail on the left. Wassermann negative. On April 10, 1921, I performed a secondary mastoidectomy, finding a number of mastoid cells which had not been exenterated at the previous operation. The tegmen antri was exposed and found to be necrotic, and on its removal the underlying dura was covered with unhealthy granulations. The tegmen antri was resected sufficiently to permit of free drainage, and the mastoid wound closed. The patient made an excellent recovery, the mastoid wound healing within fifteen days, and when I resigned from the service June 7, 1921, the abducens nerve

had almost completely recovered its function.

Case 2: Colored male, age 48, giving history of ear-ache, left, early in January, 1923; followed by rupture of drum with purulent discharge five days from onset. Ear continued to discharge. The last week in January, patient developed Influenza; followed by broncho pneumonia. Patient was admitted to hospital first week in February. Examination revealed right ear still discharging, and there was some tenderness and edema over mastoid. Tympanic membrane showed pouting, tit-like perforation, indicating retention, in the posterior inferior quadrant. Examination showed a paralysis of the left abducens nerve with a convergent squint O. S. Patient complained of severe and constant pain in the left frontal, parietal and temporal regions, corresponding to the distribution of the trigeminal nerve. Examination of the nose and throat was negative. The chest showed physical signs of a broncho-pneumonia. Blood count showed, total white cells 13,500, polys 73 per cent. Spinal fluid cell count was 60 cells to the c. c. Blood and spinal fluid Wassermann negative. X-Ray of both mastoids showed a highly pneumatic process with haziness and loss of cell detail on the left side. Urine negative. Under gas anaesthesia a liberal incision was made in the left ear drum, following which there was a disappearance of the mastoid pain and tenderness within 48 hours. Left ear continued to discharge for two weeks, at the end of which time white blood count showed 12,500 cells, with 69 per cent polys. Spinal fluid count showed 46 cells to the c. c. In view of the above findings a simple mastoidectomy was decided upon, same being performed under local anaesthesia. The mastoid cells were broken down and filled with pus and granulation tissue. A thorough exenteration of all cells was made in-so-far as possible. The mastoid wound and perforation in the drum membrane

healed within 3 weeks, and after inflation the hearing in the affected ear was normal. The tri-facial neuralgia has gradually cleared up and at the time of writing this, the sixth nerve shows some evidence of regeneration.

DR. C. W. KOLLOCK (Charleston):

The cases reported by Doctor Mobley are of great interest, not only because they are rare, but on account of the unusual combination of symptoms. First, there is an acute middle ear inflammation which runs on the ordinary way with some pain, and perhaps discharge, but not interfering with the ordinary routine of life. Suddenly, most intense pains are felt in the frontal, temporal, parietal and perhaps the occipital regions. If the drum membrane has not been incised, this will become worse, or if it is done, all pain may be reduced and the condition apparently improved, until suddenly and without warning diplopia begins, which is caused by paresis, or paralysis, of the sixth or abducens nerve. The pathology has been puzzling, and even now is not satisfactorily explained to all. It was first described, as the author of the paper has stated, by Gradenigo, and perhaps a short review by E. H. White of 57 cases reported by Gradenigo may be of interest. He divides them into three groups. The first group contains 24 cases which ran the classical, typical course to recovery after the drum membrane had been incised and drainage established, and ventilation of the Eustachian tubes accomplished.

The second group consisted of 29 cases with typical syndrome, but complicated by other lesions such as paralysis of the seventh nerve, labyrinthine inflammation, or optic neuritis, which he regards as independent complications of the otitis rather than characteristic of the lesion that causes the syndrome.

The third group had four cases which in addition to the syndrome had meningitis and died. The otitis was characterized by retention of pus in the middle ear, caused by too small an opening in the drum membrane. In 32 cases, 18 had no perforation, or it was late and generally too small. Paracentesis or enlargement generally brought about remission of symptoms, pain and paralysis, showing definite relations between otitis and paralysis of the sixth nerve. Pain, not characteristic of the fifth pair, sometimes

comes late, after discharge begins, and at appearance of paralysis. The latter occurs suddenly and without warning. In 37 cases noted paralysis occurred in 3 between the fifth and tenth day; in 8 between the twentieth and twenty-fifth day, and in 6 after the fifty-sixth day.

Typical cases usually recover. Complicating symptoms, as in the second group—meningeal irritation and mastoid complications, are otitic and have no direct bearing on the syndrome. Twenty-four mastoids in the 57 cases were done generally to help drainage and not for the direct mastoid involvement.

M. Mainescu reported a case greatly improved after the Eustachian tube has been thoroughly opened, drained and ventilated. This leads us to think that the theory of Calicetti as to the pathogenesis has much to support it. The osseous shell of the Eustachian tube is situated near the apex of the petrous bone; the sixth nerve is attached to the apex of the pyramid; inflammation of the tube affects the bone cells, produces an extra-dural focus of pachymeningitis, and the apex of the pyramid, and thus affects the abducens nerve, all of which emphasizes

the importance of early recognition of middle ear inflammation and prompt and effective drainage of that cavity.

DR. W. F. R. PHILLIPS (Charleston):

Doctor Mobley asked me yesterday about the relation of the trigeminal veins to paralysis of the abducens nerve. I think the explanation given by Doctor Kollock is correct. The abducens passes practically against the bone and there is a little notch that marks the position of the abducens. Therefore, any pressure or inflammation that presses this vein causes a rather acute condition and paralysis could very well follow.

DR. M. R. MOBLEY (closing):

I was much interested in the pathology as given by Doctor Kollock. As Doctor Phillips says, the position probably explains the paralysis of the sixth nerve. However, I do not see that that could explain the trifacial neuralgia. Other authorities have reported in addition that the seventh nerve is occasionally involved, and some times the optic nerve. To my mind the occurrence of localized meningitis and the attendant pressure there is the most feasible explanation of this paralysis.

SOME THINGS THE PEOPLE SHOULD KNOW ABOUT THE REGULAR MEDICAL PROFESSION VERSUS QUACKERY

*By Dr. L. O. Mauldin, Greenville, S. C.,
President of the South Carolina Medical Association.*

Mr. Chairman and Gentlemen of the Second District Medical Association:

It is a great pleasure to respond to your invitation to be here and address this association today. I am grateful for the opportunity to hear the many interesting papers that have been read and discussed, for they have been on subjects of unusual importance and have been presented forcibly and discussed in such a way as to make me know that the Second District Medical Association is doing its full duty as a com-

ponent part of the South Carolina Medical Association.

I have selected as my subject, "Some Things the People Should Know About the Regular Medical Profession Versus Quackery," and while it is impossible to tell in a short address all the things the people (the laymen) should know on this subject, I wish especially to emphasize a few facts that are necessary for the people to know, and necessary for the regular medical profession to tell the people in order that the conscientious layman can know "Who is Who" when it comes to selecting a doctor to treat himself or his family.

In the first place the public should know that the County Medical Society, the District Medical Association, the State Medical Association, the Southern Medical Association or the American Medical Association has each for its fundamental object in organization "To promote the science and art of medicine and the betterment of pub-

lic health." This being true, these organizations are emphatically opposed to all things that are against the health of the people; are emphatically opposed to anything that militates against the progressive advancement of the science and art of medicine and consequently are opposed to anything or any cult that has the appearance of quackery or anything that looks like it is trying to fool the people and get them to take the treatment at the hands of any cult or quack whose idea is to get directly or indirectly into the good graces of the people and relieve them of their hard earned substance by a schemingly contrived system of fooling the layman who has no definite way of telling the merits of a regular physician from a quack.

Perhaps some will say that Barnum's Axiom still holds true, that, "A sucker is born every minute." This I believe is true, but I am one who believes that the sucker can be educated and the sucker today may not be a sucker tomorrow. I also believe that the people themselves are doing some good hard thinking about matters of this kind which pertain to their welfare and every existence. When a layman gets to thinking of the matter of what constitutes a good physician, he is reluctant to fall—to anything that has the appearance of irregularities.

The people should know that the first section in our principles of medical ethics states that "The regular physician is a member of a profession that has for its prime object the service it can render to humanity, reward or financial gain should be a subordinate consideration."

The people should also know that there are more than one hundred thousand physicians of the regular school in the United States and most of these physicians are members of the Great American Medical Association and of their respective county and state medical societies and their individual and united object in life is to keep the people well and restore them to health

if they get sick. These physicians of the regular school of medicine get their training in schools and hospitals like Harvard, Mayos, Bellevue, Hopkins, Tulane and hundreds of other hospitals and institutions over the United States that teach the same methods of practice that are taught in these great seats for medical learning and research.

These one hundred thousand regular physicians, scattered through out the United States in every city, town and community, can and should extend a powerful educating influence over the people as to the things they should know about selecting a physician.

The people should also know that with all the accumulated knowledge of thousands of years of scientific research, the fountain of youth has not yet been discovered and there is no one thing that is a panacea for all diseases and while each man in the medical profession well knows that he has been instrumental in prolonging many lives in his own individual practice we know there is no antidote for "Death". Verily, "They that walk the earth are but a handful to those who slumber within its bosom."

The people should know that the ethics of our profession requires an obligation to the public as is set forth in the following section; "Physicians, as good citizens, and because their special training qualifies them to render this service, should give advice concerning the public health of the community. They should bear their full part in enforcing its laws and sustaining the institutions that advance the interest of humanity. They should cooperate especially with the proper authorities in the administration of sanitary laws and regulations. They should be ready to counsel the public on subjects relating to sanitary police, public hygiene and legal medicine."

The people should know that in the state of South Carolina there are more than one thousand physicians of the Regular School

and the majority of them are members of their county societies and the State Medical Association, having no other object in being members of these organizations than to make themselves more efficient in their work and to thereby better safeguard the health and lives of the people of their community and their state.

The people should also know that the Medical Laws of the State are for the people of the State and not for the doctors. But the laws are constructed by the people and should be construed by the people to mean that their intent and purpose is to enable the doctors to better safeguard the health of the people. In this enlightened age it won't do to let the blacksmith extract teeth, the barber do surgery or the "Jack at all trades" practice medicine. The people must know that it is necessary to have laws to find out who is qualified to do these things.

The people should know that year before last and last year the South Carolina Legislature had before it for consideration bills which were separate but each year they became known as the Chiropractic Bill. The object of these bills was to give the Chiropractic Cult a separate licensing board in order that the so-called Chiropractors might be licensed to practice Chiropractics without qualifying as physicians of the regular schools have to do. The people should know that the use of any methods or means for the treatment of the sick is practicing medicine and all who follow the practice as a profession should be qualified under the same law in order that the people may be protected from incompetents and unscrupulous grafters. For this same reason the law should be very strict. The people should know that under the present medical practice law of South Carolina a chiropractor can get a license to practice, but the law certainly requires him as well as anybody else to qualify and this is *just* for the reason that it protects the people and is not *unjust* to any honest minded man who

wishes to do the right thing toward the people and the state.

The people should know, however, that the Chiropractor's claim for his method in the treatment of disease is unsound and being unsound is dangerous and makes the chiropractor, unqualified in other lines of medicine, a dangerous man in the community. The Chiropractor claims not to believe in the Germ Theory, claims that by adjustment on the spinal column to be able to cure all diseases. This makes him a dangerous man in a community, for he is liable to be making his fancied adjustments on patients with acute infectious diseases while the infectious organisms are spreading with more than geometrical progression.

The people should know that the regular medical profession is opposed to the chiropractor for the protection of the people and because the chiropractic claim is unscientific and a recognition of it is an impediment to the advancement of science, and certainly not for any remuneration that a regular physician may get whether the chiropractor is licensed or not.

The people should know that in both years the lawmaking body of this State had to spend much valuable time and thousands of dollars of the people's money considering the merits and demerits of these bills.

Many honest men in the South Carolina Legislature were about to become led astray by chiropractic lobbyists, who had gathered in Columbia from other states to help put across a law designed for the benefit of a few Chiropractors and to the detriment of the whole people of this great state. The people should know that any law affecting the practice of medicine in any state should be carefully weighed for it just as certainly affects the destiny of the people. However, many well meaning legislators were shrewd enough to get posted and find out what their duty was to the people they represented and voted

right and killed the Chiropractic Bill, a worthless measure which was calculated to license a number of quacks to practice a so-called cult founded upon unsound principles. Being unsound and if licensed would flaunt a stigma of disgust into the face of every regular physician.

The people should know that a bill like this before the legislative body of the state takes up a great deal of valuable time of the lawmakers and by so doing involves the useless expenditure of thousands of dollars of the people's money and if it was wrong for such a bill to pass in 1922 it was wrong for a similar bill to pass in 1923 and it will be against the interest and welfare of the people for it to pass in 1924. If this or a similar bill comes up again in the next legislature, and it is almost sure to come, the people should know enough about the conditions as to say, "Let it die a borning" and not spend the time of the Legislator and the money of the people any more on a measure the merits of which have been well considered at previous sessions of the legislature.

The people should know that the Chiropractic propaganda is unsound and unscientific and they should know it so well that they can say to their legislator, "If Chiropractic is right, then the whole system of science is wrong". It differs from the Regular School of Medicine in that its hypothesis and conclusions are unscientific.

If Chiropractic is right we had as well tear down our great institutions of learning, do away with our great and small hospitals, tear down our research laboratories, scatter to the winds the accumulated knowledge that science has garnered through the ages and convert the energies of more than one hundred thousand good physicians in the United States into a conglomeration of spine pinchers and scheming advertisers.

As long as the followers of any cult can qualify to practice medicine through the channels that regular physicians do they

may be entitled to the privilege of doing as much practice or adjustment as the people may allow themselves to be inflicted by such treatment, but such people should be brought to a full knowledge of what they are doing and that they are doing it with their own free will and accord. Then let Barnum's Axiom take its course.

The people should know that it is best for all humanity that every person who practices medicine or any form of it or cult which involves the treatment of the sick or the institution of methods to keep people well, should qualify by a thorough examination before a state or a national board unprejudiced in its principles, skilled in scientific attainments, that knows the human body thoroughly in health and in diseases of all kinds and who can make a diagnosis of the condition or disease that is being treated.

The people should know that while the followers and friends of the different cults are lobbying around our State House trying to pull the wool over the eyes of our legislators and convert them to a belief in their form of practice in order to get laws passed to favor their unscientific methods, the Regular Physicians are going in and out of the homes over this great state doing all in their power with science at their command to alleviate the suffering of the sick and the afflicted.

The people should know that the regular physicians in the world cure ten thousand cases compared to one that the irregular cures.

Gentlemen of the Second District Medical Association, as members of the Regular Medical Profession, I want to tell you that the South Carolina Medical Association was organized seventy-five years ago and the Seventy-Fifth Anniversary was celebrated at its last meeting in Charleston last April. In the lapse of time since the organization of this great state association down to the present minute the Regular Medical Profession of the world has been

doing things coincident with the advance of science and by virtue of the organization the profession of South Carolina has been keeping pace with the advancement of science in other parts of the world.

I wish to tell you and I wish you to tell it to your legislators and to the people that it can be said without fear of successful contradiction that every discovery pertaining to medicine and surgery of any importance in the last seventy-five years has come through the thought and labor of the Regular Medical Profession or of those directly connected with it, and if a Charlatan, a quack, an irregular of any kind has invented or worked out anything in science that has been, is now or will be worth the price of a piece of darkness, it has not been brought to light to enrich and bless humanity.

Anaesthesia, antiseptis, asepsis, diphtheria antitoxin, typhoid antitoxin which has saved hundreds of thousands of our people and been an economic saving of millions of our money, X-Ray, Radium, Heliotherapy, the mosquito as a transmitter of malaria and yellow fever—a discovery which alone is worth billions of dollars to the human race annually, hook-worm,

serum therapy, the isolation of vitamins, the use of the microscope, the use of the ophthalmoscope, the use of the cystoscope, the discovery of numerous micro-organisms, among them being the tubercle bacillus, gonococcus, streptococcus, spirochaetada pallada, the discovery of the Wassermann reaction, the Widal reaction, salvarsan, insulin and a thousand and one more things associated with the practice of medicine in the form of medicine itself, or sanitation, prevention, diagnosis and treatment.

These are a few of the things that have been brought to light principally by the regular medical profession or of those directly connected with it, and it is well for the Regular Profession to hang these thoughts in the memory of the people and in the memory of those who make the laws for the people in such a way and with such emphasis that they can never be forgotten.

Verily, while the Charlatan, the quack, the cure all advertiser are spreading their ill conceived propaganda and fleecing the people in many unethical ways, the regular medical profession has been and is doing things for the advancement of science and for use in the alleviation of the suffering of humanity.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

NON-SPECIFIC INFECTION OF PROSTATE AND VESICLES

Dr. G. G. Smith in the Boston Medical and Surgical Journal, October 11, 1923, reported a study of 40 cases of non-specific prostatitis and vesiculitis. He states that "In the selection of these, all cases were rejected in which there was a history, definite or suspected, of gonococcus infection, even though the infection had occurred years before. In considering the cases with a urethritis of non-specific origin, those rejected even though they showed lesions in the prosterior uretha, in which the prostatic secretion did not show a definite increase in the number of leucocytes, or in which there were no definite changes in consistency of prostate and vesicles upon palpation. In other words, the cases included in this study show: (1) no history of gonococcus infection, (2) definite evidence of inflammatory changes in prostate or vesicles.

The ages of these patients fell into the following groups:

11-20, inclusive	3
21-30	10
31-40	15
41-50	8
51-60	4
	—
	40

Twelve of the forty were single. Of the 28 married men, a majority, were fathers of children."

Dr. Smith states that it is impossible to say in most of the cases just what had produced this infection. Two of the patients had had mumps some years previous with involvement of the testicle and one had

had an epididymo-orchitis caused from the typhoid bacillus; another man had an abscess of the urachus six years before. Some of the cases of non-specific prostatitis and vesiculitis followed influenza infection. It would be impossible to state the relations of these factors in the production of prostate and vesicle infection.

Dr. Smith tabulates the presenting symptom as follows:

Urethral discharge	15
Frequent urination	7
Loss of sexual power	4
Sexual irritability	3
Fever and pluria	3
Sterility	2
Arthritis	1
Iritis	1
Enuresis	1
Testicular pain	1
Perineal discomfort	1
Dysuria and hematuria	11
	—
	40

Bacteriological examination showed only a scanty growth from the prostatic material. He states that the growths frequently contain several kinds of bacteria such as diphtheroids and cocci of various types but was unable to find any predominating class of organism. The bacillus coli was found in one case.

This report by Dr. Smith is very interesting in that it deals exclusively with cases in which there could not have been any previous gonorrheal infection. In addition to this type there is a very large number of prostatic and vesicle infectious seen in patients who have previously had gonorrhea; the gonorrhea has completely disappeared, in some many years before; and the exist-

ing non-specific infection may be due to the injury to the tissues sustained from the gonorrheal infection.

It is of great importance to realize that there may be present an infection, sometimes acute, of the prostate and the pa-

tient be almost without symptoms of a local nature. In many cases when there is present a septic condition of undetermined origin, it is well to examine the prostate; the prostate and vesicles should always be examined in the search for foci of infection.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

FECAL LEAKS AND FISTULAE

C. B. Lockwood, Oxford
Medical Publications

Lockwood here uses the term fecal leaks and intestinal fistulae or leaks synonymously. Strictly speaking a jejunal or duodenal leak is not a fecal one as these structures do not contain real feces.

He divides all leaks into congenital and acquired and the latter he subdivides into traumatic and pathologic.

Congenital leaks are very rare. He has seen only two and they were through the umbilicus. They are almost impossible to close by local procedure around the navel. Usually, a laparotomy is necessary, as only in this way is it possible to absolutely determine the nature of the underlying cause, and unless the cause be removed, the effect is likely to persist.

Traumatic leaks are more common. They occasionally follow suppurative appendicitis with abscess formation and are induced by necrosis of the bowel wall. As the abscess is drained by the surgeon, the intestinal wall is liable to be perforated.

Before operating for this type of leak the author advises waiting a sufficient time for the acute inflammation to subside, for the inflammatory thickening to disappear and until the intestinal walls themselves have regained their tone sufficiently to again hold suture material.

In the majority of instances this type of leak tends to heal spontaneously; however, occasionally some 6 to 8 months are necessary.

There are a number of other lesions occurring in the abdomen, which may give rise to fistulae.

Surgeons, operating for impacted fibroids, for pus tubes and ovarian cysts may accidentally injure or perforate the bowel wall and, not know it for several days, till the patient develops peritonitis or fecal discharge.

Pathological leaks are those resulting from infectious processes either acute or chronic.

As examples of the former, he cites instances of appendiceal abscess, in which the fistulous opening is already present at time of the operation. Other instances, such as suppurative diverticulitis or salpingitis or cholecystitis might do the same thing.

As examples of the leaks caused by chronic processes he cites lues, tuberculosis, actinomycosis, and malignancy. These leaks are dangerous to life, difficult and obstinate to treatment.

Tuberculosis peritonitis in the absence of fluid is a bad field in which to operate as these wounds so frequently suppurate and a tuberculous intestinal fistula is a serious consideration. With free abdominal fluid, laparotomy, and nothing more, not infrequently cures the lesion.

Intestinal walls diseased with lues, actinomycosis, tuberculosis or malignant degeneration have very little repairing process in themselves and the least manipulation or surgical interference is frequently followed by a leak. This type of leak does not tend to heal by itself and a formidable operation, usually with enterectomy is necessary.

"The nearer the stomach the more difficult to cure the leak."

Duodenal fistula are almost always fatal. Jejunal fistulae are likewise highly danger-

ous. They prevent assimilation of food and they pour onto the abdominal wall a toxic digestive material which causes quick destruction of the tissue and much suffering.

In operating for fecal leaks be certain that the bowel lumen below the leak is patulous and that a foreign body is not left behind.

Avoid purgation, use enemas with extreme caution, administer an easily assimilable diet, and remember that the most serious obstacle to success is the ever present danger of sepsis, peritonitis.

SOCIETY REPORTS

FIFTH DISTRICT MEETS

The semi annual meeting of The Fifth District Medical Society was held in Camden, S. C. on November 8th, and was one of the most successful meetings since the organization of the society in 1914. Dr. John I. Barron, President, of York presided. Papers of exceptional value and interest to the profession were read. These were freely discussed and all were benefitted. Sixty doctors were in attendance and this included several of our friends from Columbia, Sumter and Charlotte. The next meeting will be held in York next May.

We were the guests of The Kershaw County Medical Association and were served a most delightful dinner, while music was rendered by four of Camdens most attractive young ladies. The society has never been more royally entertained and expressions of appreciation were heard on every side.

The society endorsed the recommendation of The State Board of Health that rabies vaccine for immunizing dogs be furnished by this board free of charge. It also endorsed the county dental clinics being conducted by The State Board of Health under Dr. E. A. Early. A letter from Dr. L. O.

Mauldin, President of The South Carolina Medical Association, was read. Dr. Mauldin asked the doctors to exert their efforts to keep the chiropractors from having the legislature pass their "Model Law Bill."

PROGRAM

FIFTH DISTRICT MEDICAL SOCIETY

Semi Annual Meeting

Camden, S. C.

Thursday, November 8, 1923.

Program

10:30 A. M.

- 1—Opening Prayer—Rev. W. H. Hodges, Camden, S. C.
- 2—Address of Welcome—Hon. H. G. Garrison, Mayor of Camden, S. C.
- 3—Methods of Conducting Dental Clinics in South Carolina—Dr. E. A. Early, State Director Dental Clinics, Columbia, S. C.
- 4—The Significance of Kidney Colic—Dr. Milton Weinberg, Sumter, S. C.
- 5—The Value of Skin Grafting—Dr. W. W. Fennell, Rock Hill, S. C.
- 6—Inspection—It's Value as a Diagnostic Procedure—Dr. J. D. McDowell, York, S. C.
- 7—Diabetes and Insulin—Dr. William Allen, Charlotte, N. C.

- 8—Salient Eye Facts of General Interest
—Dr. J. G. Johnson, Charlotte, N. C.
9—The Present Day Prevention and
Treatment of Diphtheria—Dr. W. E.
Simpson, Rock Hill, S. C.

- 10—Technic of Spinal Anesthesia—Dr. C.
M. Rakestraw, Chester, S. C.
2:30 P. M.
Dinner—Masonic Banquet Hall.
George A. Hennies, M. D.,
Secretary.

MINUTES

RÉPORT OF SPECIAL REFERENCE COMMITTEE

To the President and Members of the
House of Delegates:
Gentlemen:

Your special committee appointed to consider and digest the different recommendations made by your officers and committees in their reports at the meeting of the Association last year, beg to report as follows:

A. The recommendation of the committee on hospitals relative to longer terms of service than one year for members of that committee.

B. The recommendation of the fraternal delegate to the Georgia Medical Association relative to short daily sessions of the House of Delegates, as practiced by Georgia, in order that questions arising during the general session might be disposed of without waiting over till the next year. And also

C. The recommendation of the same official relative to establishing a medical defense system, similar to that of Georgia's, where the attorney of the Association answers in the name of the Association any suit brought against its members for damages resulting from professional services.

D. The recommendation of the committee on scientific work relative to the adoption of a plan or scheme for conducting the scientific activities of the Association.

E. The motion offered by Dr. William Western creating a legislative committee consisting of one member of every county society to assist in securing the necessary appropriations for the Board of Health and the Medical School.

Relative to the foregoing recommendations, your committee recommends as follows:

The recommendation of the committee on

hospitals is concurred in and extended to apply to all standing committees, that is, that all standing committees, be appointed for longer terms than one year and so ordered that a majority of the terms shall not expire in any one year.

Relative to the two recommendations of the fraternal delegate to the Georgia Medical Association, your committee recommends their favorable consideration. Specifically, it recommends that the Annual Session of the Association be three days and that the House of Delegates meet daily, if necessary, for such length of time as may be required to despatch whatever business may be before it. A program somewhat as follows might be observed:

First Day: House of Delegates, 9 a. m. to Noon. General Session, 2 p. m. to 6 p. m.

Second Day: House of Delegates, 9 a. m. to 10 a. m. General Session, 10:30 a. m. to 12:30 p. m., 2:30 p. m. to 6 p. m.

Third Day: House of Delegates, 9 a. m. to 10 a. m. General Session, 10:30 a. m. to whatever time needed to complete program.

Much time could be saved the House of Delegates by having the reports of officers and committees published in advance in the Journal, say the issue immediately preceding the Annual session. The House could then proceed at once to the consideration of the matters involved therein without the loss of time consumed in listening to the reading of these reports. Better consideration would naturally be given to the subject matters of such reports. Under existing practice there is not time for reflection and deliberation. Committees cannot be blamed if they put but perfunctory effort into their work when they see their endeavors so indifferently treated as at present.

The recommendation of the fraternal delegate to Georgia, relative to a medical defense

system, whereby the Association should answer through its own attorney suits for damages resulting from professional services brought against member of the Association seems to the committee a proper activity for the Association to assume. However, it is taken for granted that the Association would not assume any suit not recommended to it by the county society of which the defendant was a member, or in event of no county society, by the Council of the Association.

In regard to the report of the committee on scientific work, the committee thinks that the only way to determine the wisdom of that committee's recommendation is to give them a trial. If the plan should prove itself good it would need no other recommendation, if it proved itself no better or even worse than present practice, it would need no other condemnation. There seems to the committee but one way to decide the matter and that is by trying the experiment. Your committee recommends that the experiment be tried.

Regarding the legislative committee contemplated in the motion offered by Dr. Weston, it seems to your committee that this committee would be too large and unwieldy to be effective. It suggests that in lieu the President and officers of the Association be ex-officio such special committee with power to call to their assistance such other members of the Association as in their opinion may be serviceable.

Although not within the contemplated sphere of your committee, nevertheless in examining the recommendations above reported in so far as to what Constitutional changes would be involved, your committee was impressed with the fact that the Constitution and the By-Laws might be revised with advantage to all concerned.

Signed: W. F. R. Phillips, Chairman.
C. B. Earle,
G. A. Neuffer.

MINUTES HOUSE DELEGATES CONCLUDED REPORT OF THE COMMITTEE ON SCIENTIFIC WORK, 1923.

To the President and Members of the House of Delegates:

As noted in the report of the committee submitted last year, the By-Laws prescribe that the committee on scientific work shall determine the character and scope of the scientific proceedings of the Association sub-

ject to the instructions of the House of Delegates. The By-Laws also charge the committee with preparing and issuing the program, announcing the order in which the papers and discussion shall be presented.

Your committee reports that in the discharge of these duties it has pursued the same course of "masterly inactivity," to use a once famous phrase of a statesman of the long ago, that characterized its activities of last year. Some explanation of its conduct was given then, nevertheless, the committee feels that it is due the Association to explain again why it is in default, even though the explanation be more or less repetition.

The By-Laws in making it the specific duty of the committee to determine the scope and character of the scientific proceedings of the Association also impose on the committee's action, the qualification that it shall be subject to the instructions of the House of Delegates. Evidently, this means that the committee must report its program to the House of Delegates for its sanction before going forward with its consummation. It is obvious that the determination of the scope and character of the scientific proceedings is a matter requiring some considerable time for deliberation and maturation. What now are the working facts and circumstances pertaining to the committee's activities? The House of Delegates is adjourned sine die when the committee comes into being, the practice being for the newly elected president to appoint the committee for his year, another House of Delegates will not convene until a few hours before the time set for the program to go into effect. Obviously, the committee has not time to receive instructions from the House of Delegates and perfect a scientific program in the few hours that intervene between the assembling of the House of Delegates and the opening of the scientific session of the Association. But, as if this alone were not to make the committee an agency of "masterly inactivity," the By-Laws also charge the Secretary with one of the duties of the committee, namely, the preparation and issuing of the program. To add a little more to the perplexity of the situation, the Secretary is by the By-Laws a member of the committee and by practice he is not. Maybe the By-Laws have been changed, for a recent copy of the Constitution and By-Laws received from the Secretary had noted on it that "Several amendments have been made since 1913 but of no

great importance". Whether our genial Secretary meant to imply that any amendment fundamentally changing the composition of the committee and its functions was of no great importance, or committee and its functions were of no great importance, the committee will leave to pundits to determine.

Apart from the By-Laws and their defects, however responsible they may be, the fact stands out that the committee on scientific work is not functioning as a committee determining the character and scope of the scientific proceedings of the Association. As far as two years experience can illuminate the situation, whatever determination of scope and character of the scientific proceedings there has been, has been by the secretary and the president of the Association. Here let your committee disavow any intention of criticism of any one. However, the committee feels that it owes it to itself and to the Association to state the facts as they appear, leaving it to the Association to act as it may deem appropriate.

Your committee feels that a committee should function or it should cease to exist, and having endeavored to account in part for its impotency it should endeavor to show how it could be made potent, if it be the judgment of the House of Delegates that it should be.

In the opinion of the committee two measures are necessary: First, the House of Delegates should alter the composition of the committee; and second, it should actually instruct the committee annually relative to the program it wished provided for the next session.

As to the composition of the committee: Scientific custom makes the president the leader of the organization. Common experience recognizes that by virtue of his office the secretary of an organization is better acquainted with the membership of the organization than any other member or several other members. Therefore, a committee on scientific work should have as part of its personnel the president and the secretary of the organization; the first, because he is the leader pro tempore, the second, because of his general acquaintanceship with the individual membership. By joining to these two, two or three other members selected because of special qualifications in some of the parts of the art and science of the subject, a committee would be constituted that would have all the elements necessary to function—the leadership of the president,

the information of the secretary, and the special knowledge of the selected members.

Your committee therefore recommends that the committee on scientific work be a committee of five members, namely, the president and the secretary, ex-officio, and three members to be selected either by election or APPOINTMENT. And further, with respect to the selected members that the terms for which selected shall be not less than three years and so arranged that the term of but one shall expire annually. Such a committee would have continuity of purpose and work and could therefore be expected to function better than the ephemeral creation that submits this report.

The second measure mentioned above can be accomplished by having the committee submit annually a program for the succeeding year. This would afford the House of Delegates an opportunity to criticize, make changes, and give instructions relative to the execution of the program, as deemed in the best interest of the Association. In order to give concrete opportunity for such action on the part of the present House of Delegates, and to illustrate the workings of such procedure, the committee recommends as for the coming year the program tentatively submitted by this committee last year.

Should the recommendation relative to the composition of the committee be accepted, then the further recommendation is made that this committee be constituted in its personnel immediately following the election of the officers for the coming year and the committee organized at once for work, while there is opportunity for its members to get into personal communication with one another.

REPORT OF COMMITTEE ON SCIENTIFIC WORK 1922

Should the House of Delegates not care to adopt the recommendations herein above made, then the committee recommends that it be abolished, because it has not functioned in the past and is not functioning in the present and apparently cannot function as at present constituted and circumstanced.

Finally, the committee wishes to call attention to the fact that all of its recommendations herein above made do not involve Constitutional amendments, but are entirely within the province of the By-Laws. Therefore, should the House of Delegates think well of any of them, a majority vote

will incorporate them into the By-Laws.

Respectfully submitted,

F. B. Johnson,

W. F. R. Phillips, Chairman.

W. R. Wallace.

The report which your committee on scientific work, hereby submits is not on what the committee has done in connection with the preparation of the program of the present meeting, but the committee's conception of how the scientific work of the Association might be more systematically planned, and being so, become more generally advantageous to the Association as a whole and its members individually.

The By-Laws prescribe that the committee on scientific work shall determine the character and scope of the scientific proceedings of the Association, subject to the instructions of the House of Delegates. The apparent intent of the By-Law, it seems to the committee, is that there shall be some antecedent communication of the committee to the House of Delegates before the committee can with propriety assume the important duty of deciding what shall and what shall not be the scientific work of any given meeting of the Association. The House of Delegates meets, except extraordinarily, but once a year and that on the day before the general meeting of the Association, the meeting that is devoted almost exclusively to the scientific activities of the Association. As the practice appears to be, the committee on scientific work is appointed annually and usually of an entirely new personnel, and after the House of Delegates has adjourned. Hence, the committee has no opportunity to communicate with and receive advice and instruction from the House of Delegates regarding the scientific work of the next Association year. The annual change of personnel and the inability of the new committee to communicate with the House of Delegates have worked to the end that there is neither tradition nor continuity of purpose passed on from year to year—the committee is hardly acquainted with itself and has not the benefit of the experience or of the suggestions that may have come to committees of preceding years. Under these circumstances, the difficulty, not to say impracticability, of any systematic conduct of the scientific activities of the Association as a whole is apparent. Consistent and fruitful work in any field of activity can be carried forward only where

some definite plan and purpose is always in mind and guiding the energies put forth.

Therefore in view of the foregoing, it seems to your committee that the by-laws should be modified to provide that the committee on scientific work shall annually formulate provisional program and present it to the House of Delegates for consideration; after action by the House of Delegates the committee shall then be charged with the details of its execution, supplemented with whatever specified or general instructions and powers that the House may deem requisite or advisable to give. The advantages that appear to the committee that would follow the adoption of such a procedure are:

1. Earlier and more general information regarding the scientific program of the next annual meeting.

2. Greater probability of the program embodying subjects of interest to the majority of the members, and of interesting more members in the subjects of the program.

3. Interesting more persons in the preparation of the program.

4. Affording more time to those specially interested in the subjects to be considered to investigate and perfect whatever they may contribute to the program.

Carrying out the idea embodied in the foregoing generalized consideration of procedure, the committee presents a provisional formula of purpose and procedure for your consideration in the shape of certain propositions, illustrated wherever admissible by concret suggestions, as follows:

1. That one or two subjects be chosen for collective clinical investigation every year.

Every member whose activities may bring him in relation to either or both of these subjects being requested to study them so far as possible, to reduce his observation, facts, and opinions to writing and communicate them for collation and report to a special committee, to be known as the special committee on collective clinical investigation. This committee to report at the annual meeting the results of the investigation.

Suggested subjects for 1923:

Pellagra,

Fevers of a typical character.

2. That two or three general special subjects be assigned annually to a special committee, or committees, for review of progress made therein as determined by an examination or recent literature, and to present a summary or commentary thereon at

the annual meeting. This committee, or committees, to be known as the special committee, or committees, on review of progress in the subject or subjects assigned.

Suggested subjects for 1923:

Cardiovascular diseases,

Disorders of the thyroid.

3. That some subject relating to the sociological aspect of medicine be chosen annually for general consideration and discussion at the annual meeting; that two members be specifically selected to open the discussion, after which it be opened to all. This general discussion could well be conducted somewhat after the manner of a round table conversation.

4. That the equivalent of one day, 8 to 10 hours, be allotted to individual papers of the usual sort, that is, papers on topics that the writers are individually interested in presenting to the Association.

5. That provision be made annually for one or two addresses by some member or members of the profession, but not of this Association, who has, or have, attained distinction in medicine. The subject, or sub-

jects, of the address, or addresses, to be determined by the President of the Association after conference with the committee on scientific work.

6. That to hold a good general attendance of two days, which experience appears to be the maximum period that a fair attendance can be held, the House of Delegates meet hereafter on the evening of the first day of the meeting.

7. To assure two full days to the scientific work of the Association, that no entertainments be provided by the committee on local arrangements that shall in any manner conflict with the times set for the work of the Association. While appreciating the spirit of hospitality that actuates members of the place of meeting to extend entertainment to the Association, the Association holds that the best interests of the organization are to be found in its scientific and not in its social pleasures.

Thos. J. Davis,

Robt. A. Marsh,

W. F. R. Phillips, Chairman.

BOOK REVIEWS

The Fourteenth Edition of **PATTEE'S PRACTICAL DIETETICS**. (Completely revised) The universally adopted text; many important new features.

PRACTICAL DIETETICS is the latest and most authoritative dietetic text issued since the publication of the "Recent Outline of a Course of Study in Dietetics" issued by the American Dietetic Association.

PATTEE'S TEACHER'S DIETETIC GUIDE—given gratis with "Practical Dietetics"—includes this outline with specific reference to pages in "Practical Dietetics" where replies may be found. "Practical Dietetics" also follows the outline arranged by the National League of Nursing Education.

ABT'S PEDIATRICS. By 150 specialists Edited by Isaac A. Abt, M. D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. In eight octavo volumes totaling 8,000 pages with 1,500 illustrations, and separate Desk In-

dex volume free. Now ready—Volume 1 containing 1,240 pages with 284 illustrations. Volume 11 containing 1025 pages with 180 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$10.00 per volume. Sold by Subscription.

TEACHER'S DIETETIC GUIDE—to accompany Pattee's Practical Dietetics. Given gratis with each copy of Pattee's Practical Dietetics. Not sold separately. A. F. Pattee, publisher, Mount Vernon, New York. Printed in U. S. A., 1923.

HABITUAL CONSTIPATION—its causes, consequences, preventions, and rational treatment set forth in non-technical language. By Ismar Boas, M. D., Professor of Medicine in Berlin. Translated by Thomas L. Stedman, M. D., author of "A Practical Medical Dictionary", editor of "A Reference Handbook of the Medical Sciences. Formerly editor of the Medical Record. Funk and Wagnalls Company, New York and London, 1923. This is

one of the best books ever presented to the laity on the subject.

GYNECOLOGY. By William P. Graves, M. D., Professor of Gynecology at Harvard Medical School. Third Edition, Thoroughly Revised. Octavo volume of 936 pages with 388 half-tone and pen engravings and 146 microscopic drawings, 103 of the illustrations in colors. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$9.00 net.

The professors of the Harvard Medical School have always been looked upon as capable of leadership. Dr. Graves presents a magnificent volume of scientific value second to none. The illustrations are especially fine, giving the operative technique in the minutest detail.

CLINICAL DIAGNOSIS. By Laboratory Methods. A Working Manual of Clinical Pathology. By James Campbell Todd, M. D., Professor of Clinical Pathology, University of Colorado. Fifth Edition, Enlarged and Reset. Octavo of 762 pages with 325 illustrations, 29 in colors. Philadelphia and London: W. B. Saunders Company, Cloth, \$6.00 net.

Todd's Clinical Diagnosis stressing the importance of a laboratory has been a popular book for a number of years. Laboratory procedures are subject to such rapid changes that frequent revisions become necessary. The illustrations are good and the entire work creditable.

Strictly Up to the Minute.

PHYSICAL EXAMINATION AND DIAGNOSTIC ANATOMY. By Charles B. Slade, M. D., formerly Chief of Clinic in General Medicine, University and Bellevue Medical School. Third Edition, thoroughly revised. 12mo of 179 pages illustrated. Philadelphia and London: W. B. Saunders Company, Cloth \$2.00 net.

A thorough knowledge of anatomy from the diagnostic standpoint is highly desirable as a ground work for the medical student.

In this book the author endeavors to emphasize such teachings.

A PRIMER FOR DIABETIC PATIENTS. A Brief Outline of Diabetic Treatment, Including Directions for the Use of Insulin, Sample Menues, Receipts and Food Tables. By Russell M. Wilder, M. D., Mary A. Foley, and Daisy Ellithorpe, Dietetians The Mayo Clinic. Second Edition, Reset. 12mo of 119 pages. Philadelphia and

London: W. B. Saunders Company, 1923. Cloth, \$1.50 net.

Most of the literary output of the Mayo Clinic attracts the eye of the medical man throughout the world. This little book is no exception. It is intended to put into the hands of the patient and has been revised and rewritten since the discovery of insulin.

A TEXT-BOOK OF ANATOMY AND PHYSIOLOGY, By Jesse F. Williams, M. D., Professor of Physical Education. Teachers College, Columbia University, New York City. 12mo of 523 pages with 369 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth \$3.00 net.

The writer of this volume occupies a position furnishing an important field of research and teaching experience.

The result of this opportunity has been presented in an admirable way in book form. The illustrations are unusually good.

THE EXAMINATION OF PATIENTS. By Nellis B. Foster, M. D., Associate Physician to the New York Hospital; Associate Professor of Medicine at Cornell University, College of Medicine. Octavo of 253 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth \$3.50 net.

An increasing number of books are appearing on the examination of the patient. This is the best one we have seen yet.

Every physician in time develops his own scheme of bedside or office examination of his patients, yet, suggestions from other men are often valuable.

A MANUAL OF THE PRACTICE OF MEDICINE. By A. A. Stevens, M. D., Professor of Applied Therapeutics in the University of Pennsylvania. Eleventh Edition, Entirely Reset. 12mo of 645 pages, illustrated. W. B. Saunders Company, Philadelphia and London: 1923. Cloth, \$3.50 net.

Steven's Manual is a very practical handbook for the student or the practitioner. Having gone through eleven editions shows the popularity of the author.

THE PROGNOSIS OF INTERNAL DISEASES. By Henry L. Elsner, M. D., LL. D. Professor of Medicine, College of Medicine, Syracuse University. New York and London. D. Appleton and Company. Only a physician of vast experience and

wide knowledge of Medicine and Surgery should attempt a work on prognosis. The author of this volume measures up to these requirements.

The subject matter reflects not only the ripe experience of the clinician but the attainments of a brilliant scholar as well.

PRINCIPLES OF VITAL STATISTICS. By I. S. Falk, Ph. D., Department of Public Health, Yale University. Octavo of 258 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1923. Cloth \$2.50 net.

The study of vital statistics rarely interests the average physician. He has not been trained to any great extent along this line as a student and his life work is mainly curative medicine.

It is important though to understand this subject and the little book before us will go far toward this end.

A CLINICAL GUIDE TO BEDSIDE EXAMINATION. By Dr. H. Elias, Dr. N. Jagic, Dr. A. Luger, University of Vienna, Austria. Arranged and Translated by Wm. A. Brams, M. D., Chicago, Ill. New York Rebman Company.

History taking and the ordinary scientific regime of examining a patient at the bedside continue to be of vast practical importance. This little book presents in a clear cut way such routine of examination and represents something of the famous Vienna School.

TEXT-BOOK OF PEDIATRICS. Edited by Professor E. Feer, Director of The University Children's Clinic, Zurich. Translated and Edited by Julius Parker Sedgwick, B. S., M. D., Professor of Pediatrics, University of Minnesota, Medical School and Carl Ahrendt Scherer, M. D., F. A. C. P., Duluth, Minnesota. 262 Illustrations. First Edition in English, Philadelphia and London. J. B. Lippincott Company.

While Pediatrics has made great advances in the United States. Books presenting the European view point are helpful to the student and practitioner.

A large number of authorities contributed to this volume.

RUBBER AND GUTTA PERCHA INJECTIONS. By Charles Conrad Miller, M. D., Chicago.

Preliminary report of the use of various forms of rubber and gutta percha subcutaneously for the purpose of raising the depressed nasal bridge and filling in var-

ious tissue deficiencies. Illustrations and descriptions of the types of material used, the manner of preparation, and special syringes used by the writer. Price \$1.75 prepaid. Oak Printing & Publishing Co., Chicago.

THE COMPLETE MEDICAL POCKET-FORMULARY AND PHYSICIAN'S VADE-MECUM. Collated For The Use of Practitioners by J. C. Wilson, A. M., M. D. Sixth Edition, thoroughly Revised by Creighton H. Turner, M. D., Philadelphia, J. B. Lippincott Company.

This volume contains thousands of prescriptions found useful by physicians all over the world.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynaecology, Orthopaedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other Topics of interest to students and practitioners. By leading members of the Medical profession throughout the world. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, U. S. A. With the Collaboration of Chas. H. Mayo, M. D., Rochester. Sir John Rose Bradford, M. D., London; William S. Thayer, M. D., Baltimore; Frank Billings, M. D., Chicago; A. McPhedran, M. D., Toronto; Sir Humphry Rolleston, K. C. B., M. D., D. C. L., London; Seale Harris, M. D., Birmingham, Alabama; Hugh S. Cumming, M. D., D. P. H., Washington, D. C.; John G. Clark, M. D., Philadelphia; James J. Walsh, M. D., New York; Charles Greene Cumston, M. D., Geneva; John Foote, M. D., Washington, D. C.; Charles D. Lockwood, M. D., Pasadena, California. Correspondents: A. H. Gordon, M. D., Montreal; James Burnet, M. D., Edinburgh. Volume III. Thirty-Third Series, 1923. Philadelphia and London. J. B. Lippincott Company.

ALCOHOL AND PROHIBITION. In their relation to civilization and the art of living by Victor G. Veeki, M. D., San Francisco, California, Philadelphia and London. J. B. Lippincott Company.

The author is a clever writer on any subject and ownig to his scholarly attainments has presented herewith an attractive resume of the alcohol question.

THE SURGICAL CLINICS OF NORTH AMERICA. October, 1923, Volume 3—

Number 5. Minneapolis—St. Paul Number. Published Bi-Monthly, W. B. Saunders Company, Philadelphia and London.

THE SURGICAL CLINICS OF NORTH AMERICA. August, 1923, Volume 3—Number 4. Chicago Number. Published Bi-Monthly W. B. Saunders Company, Philadelphia and London.

INTERNAL MEDICINE. A Work for the Practicing Physician on Diagnosis and Treatment with a Complete Desk Set. In three volumes, illustrated with 427 Text illustrations and 14 in color.

MEDICAL DIAGNOSIS. Sixth Edition Revised and Enlarged in Two Volumes. Volume 1: Medical Diagnosis in General; The Methods and Their Immediate Results; Symptoms and Signs, Tests. By James C. Wilson, A. M., M. D., Emeritus Professor of the Practice of Medicine and Clinical Medicine in the Jefferson Medical College and Emeritus Physician to Its Hospital; Physician Emeritus to the Pennsylvania Hospital and Physician-in-Chief to the Lankenau Hospital, Philadelphia. Formerly Captain M. C. U. S. A. Assisted by Creighton H. Turner, M. D. "The Whole Art of Medicine is in Observation." Philadelphia and London, J. B. Lippincott Company.

Monographic contributions in the form of books or otherwise have much to commend

them. These three volumes constitute an excellent working library for the active practitioner. The volume on treatment covers in a brief but authoritative manner, the diseases mentioned in the two volumes on diagnosis.

HUMAN ANATOMY. Including Structure and Development and Practical Considerations. By Thomas Dwight, M. D., LL. D. Late Parkman Professor of Anatomy in Harvard University; Carl A. Hamann, M. D. Professor of Applied Anatomy in Western Reserve University; J. Playfair McMurrich, Ph. D. Professor of Anatomy in the University of Toronto; George A. Piersol, M. D., Sc. D. Professor of Anatomy in the University of Pennsylvania; and J. William White, M. D., Ph. D., LL. D. Emeritus Professor of Surgery in the University of Pennsylvania With Seventeen Hundred and Thirty-Four Illustrations, of which Fifteen Hundred and Twenty-Two are Original and Largely from Dissections by John C. Heisler, M. D. Professor of Anatomy in the Medico-Chirurgical College. Edited by George A. Piersol. Seventh Edition. Philadelphia and London, J. B. Lippincott Company.

This splendid Anatomy published at an enormous expense is highly representative of best publications of the kind in the world. The illustrations are superb.

Correspondence

THE NEW COMPETITION

Many progressive manufacturers and merchants say that the cut price bait is losing its attraction. They are paying less attention to this method of getting more business, and more attention to the idea of quality merchandise service. They believe the results so far achieved justify the statements that their customers will be better served and their own profits enhanced by giving more attention to quality, and less to price.

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toward the development of *quality* production.

Dr. Earl Miller has been appointed Director of the Department of Experimental Medicine of Parke, Davis & Company, Detroit, to fill the vacancy following the death of Dr. Ezra Read Larned, who was the originator and organizer of this department and occupied the position as head of the department until his death.

Dr. Miller was assistant to Dr. Larned for twelve years and has a wide acquaintance among medical men interested in clinical research work.



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